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MOTIVATION, WORK VALUES, ORGANISATIONAL COMMITMENT AND JOB SATISFACTION: AGE AND GENERATIONAL COHORT EFFECTS

BY

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A thesis submitted to the Faculty of Commerce, Law and Management, University of the Witwatersrand, Johannesburg, in fulfilment of the requirements of the degree of Master of Commerce.

JOHANNESBURG

SOUTH AFRICA

SEPTEMBER 2013

DECLARATION

I hereby declare that this thesis is my own, unaided work. It is being submitted in fulfilment of the requirements for the degree of Master of Commerce in the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree of examination in any other university.

_____

Signed on this the _____ day of _____, 2012

Abstract

Since the year 2000, younger workers born after 1980 have been entering the South African workforce in large numbers. The experienced Baby Boomer generation, born between 1945 and 1964 has started leaving the workplace in retirement. With organisations currently facing the challenge of skills shortages in some professions/trades, it is important for organisations to recognise the potential influence of work values on attitudes and behaviours at work in order to retain staff and groom future leaders. Different Generations are assumed to bring their own norms and values into the work place and an understanding of what motivates these different generations will ensure that organisations better plan retention strategies. As South Africa receives the latest generation of workers (Generation Y) into the work force, managers need to be encouraged to deal with the potential generational differences among workers. The purpose of this quantitative study was to research and examine the relationship between age, sources of motivation, work values, organisational commitment and job satisfaction across generations in the South African work force. A research model was developed to test theory on generational differences. Cohort membership was hypothesised to influence motivation, work values, organisational commitment and job satisfaction. Work values and sources of motivation were also hypothesised to influence organisational commitment and job satisfaction. A quantitative study was conducted to investigate the association between age (which represented cohort membership) and sources of motivation, work values, organisational commitment and job satisfaction. The study was designed to answer the main question: Are there significant differences in sources of motivation, work values, organisational commitment and job satisfaction across the three generations found in the South African workforce today? Data were collected using both an on line and hard copy questionnaire distributed to corporate companies that participate in career exhibitions at the University of the Witwatersrand. Data were analysed using SPSS software version 19 and 20.The findings largely confirm previous findings which suggest that there are significant differences between generations in sources of motivation, work values, organisational commitment and job satisfaction. Consistent with research, older workers, Baby Boomers were found to have higher job satisfaction than younger workers. An interesting finding of this study was that contrary to research literature, younger workers, generation Y, were found to have higher organisational commitment than Baby Boomers and generation X.

Consistent with previous studies, Baby Boomers were found to have higher levels intrinsic work values than both generation X and Y. The results indicate that there are differences between generations and this has implications for Human Resource practitioners and researchers. Based on the findings of this research, further research is warranted specifically in understanding organisational commitment across generations.

Keywords:

Generation Differences, Cohorts, Age effects, Generational characteristics, Period effects, Attitude, Organisational commitment, Job satisfaction, Work values, Baby Boomers, Generation X, and Generation Y.

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CHAPTER 1

INTRODUCTION AND BACKGROUND TO THE STUDY

1.1.0 Introduction

Generational differences in the workforce have been a focus of research in recent years, especially the United States of America and the United Kingdom. This chapter introduces the study research question on generational differences in the work place and reviews the factors that have brought these issues into prominence in business and research. Generational differences have become a concern for modern business because of real and perceived changes in the demographic makeup of the workforce. For the first time in history, it is possible to find four distinct generational cohorts in the same workplace (Pekala 2001). Leaders have the responsibility of managing and motivating these different generations. The term generational cohort was defined by Zemke, Raines and Filipczak (1999) as people born in the same general time span, and share key life experiences that include demographic trends, historical events, public heroes, entertainment, past times and early work experiences. It is widely believed that each generation is unique and has its characteristics shaped by life events experienced during formative years and that distinct generations hold different attitudes toward work, (Macky, Gardner & Forsyth, 2008).

According to Westerman and Yamamura (2006), the demographic description of the workers in the United States of America is well documented and there are three generations predominant in the American work-force today. The Veterans, as described by American literature have largely retired from work (Macky et al., 2008). The study of generational differences is a critical and underdeveloped area of inquiry outside America and the United Kingdom. The South African workforce is dominated by workers below the age of 34 (Statistics South Africa, 2011). Ultimately, all organisations are influenced by the values and preferences of the latest generation as they try to groom future leaders (Mackey et al., 2008). It is therefore important for organisations to understand possible generational differences in order to minimise misunderstandings in the workplace. Research suggests that generational differences can be a source of conflict in organisations (Adams, 2000; Jurkiewicz, 2000; Karp, Fuller, & Sirias, 2002).

According to Leschinsky and Michael (2004), an understanding of the differences and relationships between motivators and associated work outcomes can be used as a building block for the development of recruitment policies, training methods, and incentive packages in organisations.

A gap in literature, however, seems to exist with regards to integrating generational differences with sources of motivation, work values, organisational commitment and job satisfaction both generally and specifically within the South African context. This study seeks to extend theory and research on the above constructs from the international context into the South African work context for testing.

Two parallel areas of research have been of particular interest to organisational psychology during recent years. These two areas are the study of work values and the analysis of organisational commitment (Elizur & Koslowsky, 2000). Both constructs are learned and can change over time (Elizur & Koslowsky, 2000). This study seeks to link the above-mentioned outcomes with generational membership. It is the aim of this study to find out whether these constructs are associated and whether they are linked to sources of motivation. Cherrington (1977) argues that older workers are more work oriented than younger workers. Three reasons put forward by Cherrington (1977) are that an individual's perspectives and psychological makeup changes as one gets older due to the distinct experiences one goes through. The second reason is that historical experiences have a strong impact on one's work values. Third, the work values of older workers are different from younger workers because the age groups would have received different kinds of training and education in their lives (Cherrington, 1977). This study seeks to explore these concepts in the South African context.

Based on literature review, a model of the relationship between generational differences, sources of motivation, work values, organisational commitment and job satisfaction will be tested quantitatively using a sample from the South African context. Research literature relating to the constructs of generational differences, motivation, work values, organisational commitment and job satisfaction will also be reviewed. Below are definitions of key terms used in the dissertation.

1.1.1 DEFINITION OF TERMS

- **Generation Differences- a** set of historical events and related cultural phenomena which have impacted in a way that creates a distinct generational group, (Kupperschmidt, 2000).

- **Cohorts**- A group of individuals born at the same time who are *presumed* to be similar as a result of shared experiences, (Zemke et al., 1999).

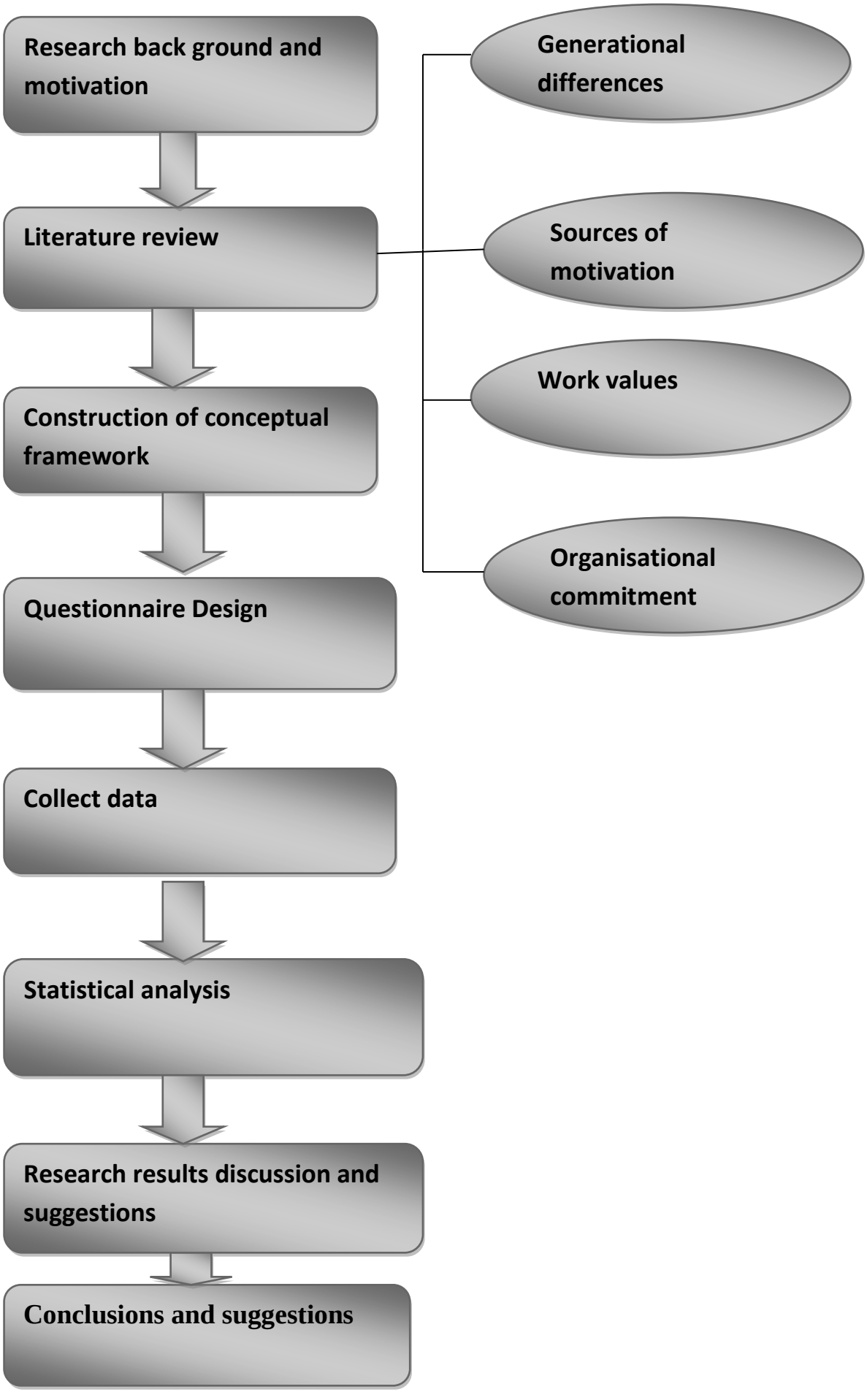
- **Age effects**- The changing views, attitudes and behaviours of individuals as they grow older, (Parry & Urwin, 2011).

- **Generational characteristics—**worldview, values, and attitudes commonly shared by or descriptive of cohorts, (Kupperschmidt, 2000).

- **Period effects-** The impact of environment on values, behaviours and attitudes that one must take into account when attempting to identify generational, cohort or age-related impacts, (Parry & Urwin, (2011).

- **Attitude-** a relatively enduring organisation organisation of beliefs around an object or situation predisposing one to respond in some preferential manner, (Rockeach, 1972).
- **Organisational commitment** refers to the psychological bond that links employees to their organisation, (Allen & Mayer, 1993).
- **Baby Boomers-**people born between the years 1945 and 1964 and their ages range between 49 and 68 (Wong, Gardner, Lang & Coulon 2008).
- **Generation X-**people born between the years 1965 and 1981 and their ages range between 32 and 48 (Wong, Gardner, and Lang & Coulon 2008).
- G**eneration Y-**people born between the years 1982 and 2000 and their ages range between 13 and 31 (Wong, Gardner, and Lang & Coulon 2008).

Figure 1 **Research Procedure below.**



1.2.0 MAIN RESEARCH PROBLEM AND RESEARCH QUESTIONS.

1.2.1 Research Problem

The research problem pursued in this research relates to the lack of knowledge around possible generational differences in the workplace outside the West with special reference to South Africa. This research, therefore, aims to extend literature in this important area of study. The research problem addressed in this study has both a theoretical and practical component. Cohort membership is expected to have a direct influence of work behaviours and attitudes such as motivation, organisational commitment and job satisfaction. One of the problems faced by organisations today is the shift in diversity of the workforce as Generation Y enters the workforce, and Baby Boomers begin to leave the workforce (Eisner, 2005; O'Bannon, 2001). If indeed cohort membership does have an influence on workplace behaviours and attitudes, organisations need from time to time to re-evaluate their human resource retention strategies. The combination of a significant group of workers Generation Y entering the workforce, and experienced Baby Boomers leaving the workforce will force organisations to find better ways to attract and retain key staff (Parry & Urwin, 2009). The generations are thought to hold distinct attitudes towards organisations and co-workers. These attitudes are shaped by the times they were born and raised (Tolbiz, 2008). For employers to manage the complexities of generational dynamics in today's workplace, managers need to have a strong understanding of what each generation holds as important in their working lives (Lyons, Duxbury & Higgins 2005).

General attitudes about work include feelings toward both intrinsic and extrinsic work rewards, the recognition and enjoyment received from work, the importance and sense of obligation of work in one's life, and the amount of focus that the role of work should play in a worker's life (Crumpacker & Crumpacker, 2007). These attitudes and perceptions about work should provide some insight into today's workforce (Parry & Urwin, 2009).

It is not widely agreed as to whether management and to what extent management should address generational differences, and stereotypes as part of its strategic planning (Crumpacker & Crumpacker, 2007). Those in favour assert that generational differences in values and attitudes contribute to the workplace norms and culture that management must understand in order to come up with productive teams (Parry & Urwin, 2011).

Those opposed contend that issues attributed to generational differences at the workplace are overstated and not supported by empirical research (Giancola, 2006).The impact of having multiple generations in the workplace has seen an increase in research in this area, especially from the United States of America. Most of the research relates to general values of the different generations (Hill, 2002; Smola & Sutton, 2002; Noble& Schewe, 2003; Schewe & Meredith, 2004). The increasing number of the younger generation entering the job market means that tension between age groups is inevitable in the workplace (Parry & Urwin, 2009). Management, therefore, has to take the initiative to deal with these differences in such a manner that productivity is not compromised.

Productivity has been linked to workplace motivation which has also been reported to predict various organisational behaviours (Barbuto, 2004). A study of how generational differences may predict these behaviours is important in understanding motivational issues at the workplace. One of the greatest challenges faced by all firms is finding, retaining and developing the skilled workforce necessary to meet the organisations' objectives (Tolbiz, 2008). Thus, an understanding of intergenerational differences in sources of motivation, work values, organisational commitment and job satisfaction may inform managers how to optimally plan motivational strategies (Parry & Urwin, 2009). This study attempts to build upon the literature on this area by providing an understanding of generational differences in relation to sources of motivation, work values, organisational commitment and job satisfaction in South Africa. The aim of the research, the research objective, the research questions and hypothesis are considered below.

1.2.2 THE AIM OF THE RESEARCH

The aim of the research is to investigate the interrelationships around cohort membership, sources of motivation, work values, organisational commitment and job satisfaction where insight was expected to be obtained into how organisations might improve their retention strategies and where such improvements might contribute to understanding how productivity might be improved in organisations.

The goal of the present study is to determine whether differences in the above mentioned constructs exist across generations found in the South African workforce today. Four broad research questions are addressed.

First, the study seeks to determine whether there are significant differences in sources of motivation across the generations found within the South African work force today, and if so, to identify the nature of these differences.

Second, the study further seeks to ascertain whether the three generations have different work values. Third, the research seeks to determine whether organisational commitment is affected by cohort membership. Fourth, the study seeks to determine whether different generations have different levels of job satisfaction. Specifically, the study seeks to:

- Examine whether employee actions, behaviours and attitudes are associated with work values and generational characteristics.
- Investigate whether the five sources of motivation identified by Barbuto and Scholl (1998) are associated with generational differences.
- Investigate whether work values are common across generations.
- Investigate the extent to which cohort membership can affect is related to organisational commitment of the workers.
- Investigate whether levels of job satisfaction differ across generations.
- Test theory that predicts a relationship between cohort membership, organisational commitment and job satisfaction.

1.2.3 Research Objective

The objective of the research is to test theory that relates to cohort membership, sources of motivation, work values, organisational commitment and job satisfaction. The overarching objective is to generate insight into this area, which is an underdeveloped area of study in South Africa (Swanepoel, Erasmus & Schenk, 2008) and thereby generate recommendations, to assist Human Resources Practitioners in developing policies and practices to improve organisational efficiency and effectiveness.

A review of the existing literature suggests that while previous research has examined differences in work values across generations (Smola & Sutton, 2002; Twenge, Campbell, Hoffman & Lance, 2010), few research findings have examined generational differences in motivational sources in the workplace have been few.

Of those research studies that have examined differences in personality and motivational drivers across generations (Twenge, 2000, Twenge 2001a, Twenge, 2001b), these have tended to focus on broad differences without specifically focusing on the workplace. The research on generational differences at work has tended to focus mostly on work values. Work values refer to an employee's attitudes regarding what is 'right', as well as attitudes about what an individual should expect in the workplace (Brown, 1976; George & Jones, 1999). Although an individual's personality, preferences expectations and motivational drivers are likely to be related to and influenced by his or her work values (Ashley, Bartram & Schoonman, 2001), it is important to maintain a distinction between work values and motivational drivers (Parry & Urwin 2009). The main research question derived from the above objectives is considered as follows.

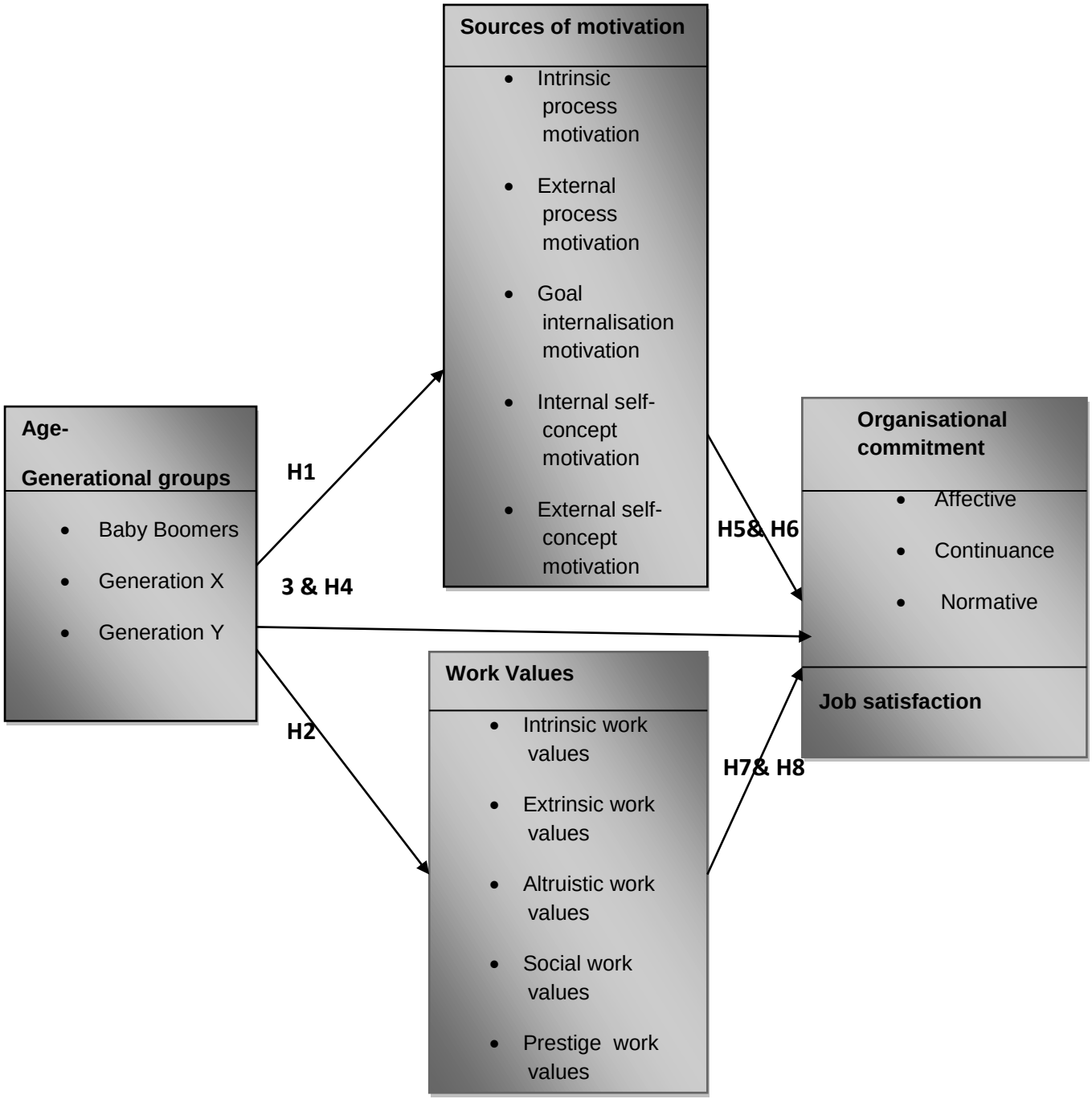
1.2.4 The Research Question

According to Twenge et al. (2010, p. 4) generations are defined as identifiable groups that share birth years and significant life events at critical developmental stages. These experiences influence an individual's feelings towards organisations, work values and how to satisfy expectations (Smola & Sutton 2002). From the above conceptions, the core research question is *"Are there significant differences in sources of motivation, work values, organisational commitment and job satisfaction across generations in the South African workforce?"*

Hinged upon the above question, a model is developed based on the work of Hess and Jespen (2009) whose research related to generational membership, career stages and the development of the psychological contract. Hess and Jespen's (2009) model has been extended in this work through linking generational differences with sources of motivation, work values, organisational commitment and job satisfaction. Further sub-ordinate research questions are derived from the above core question. Hypotheses are in turn derived from the research questions.

This study recognises the fact that the construct of generational differences is a complex phenomenon which may be influenced by other variables. In order to take into account other factors that may explain the relationships, there is need to measure variables such as age, tenure, level of education, race, health status, and gender in order to come up with a sophisticated model shown below.

Figure 2 Tested model below: Source: Hess and Jaspen (2009)



The eight core hypotheses that were derived from this general model are listed as follows:

1.2.5 RESEARCH QUESTIONS AND HYPOTHESES

- *Is there a significant association between age and sources of motivation across the three generational groups found within the South African workforce today? Hypothesis 1. There is no significant association between age and sources of motivation.*
- *Is there a significant association between age and work values across the three generational groups within the South African workforce today? (Hypothesis 2. There is no significant association between age and work values.*
- *Is there a significant association between age and organisational commitment across the three generational groups found within the South African workforce today? (Hypothesis 3. There is no significant association between age and organisational commitment.*
- *Is there a significant association between age and job satisfaction across the three generational groups found within the South African workforce today? (Hypothesis 4. There is no significant association between age and job satisfaction.*
- *Is there a significant association between sources of motivation and organisational commitment? (Hypothesis 5. There is no significant association between sources of motivation and organisational commitment.*
- *Is there a significant association between sources of motivation and job satisfaction? (Hypothesis 6. There is no significant association between sources of motivation and job satisfaction.*
- *Is there a significant association between work values and organisational commitment? (Hypothesis 7. There is no significant association between work values and organisational commitment.*
- *Is there a significant association work values and job satisfaction? (Hypothesis 8. There is no significant association between work values and job satisfaction.*

The chapter outline of the thesis is introduced as follows.

1.2.6 CHAPTER PLAN FOR THESIS

Chapter 1

In this chapter the purpose of the study was introduced and the research objectives clearly spelt out. The gap in knowledge in relation to generational differences in the African context is discussed. The main research question "Are there significant differences in sources of motivation, work values, organisational commitment and job satisfaction across generations in the South African workforce?" is presented. An introduction of the literature review was also given highlighting the tension between researchers on theory of generational differences. The definitions of the main research constructs were also given. The theoretical basis for integrating generational differences with sources of motivation, organisational commitment, work values and job satisfaction was briefly discussed. A model (diagram) representing the research process was also provided. After this, the research questions were introduced, and the derived hypotheses were stated. The chapter concluded with an outline of the chapters for the research.

Chapter 2: Literature Review

The literature that relates to generational differences is reviewed. After this, the literature that relates to motivation theory is also reviewed. Content and process theories of motivation are discussed. Five sources of motivation are identified and discussed. These are: Intrinsic motivation, extrinsic motivation, internal self-motivation, external self-motivation and goal internalisation. Literature is then reviewed that relates to work values. Five dimensions of work values that have been a common thread in research relating to work values are reviewed. These are: intrinsic work values, extrinsic work values, prestige work values, altruistic work values and social work values. Literature that relates to organisational commitment is reviewed and researchers have identified three dimensions of organisational commitment as follows: affective commitment, continuance commitment and normative commitment. Literature relating to job satisfaction is also reviewed and the final section of the literature review examines the relationships among the five concepts under study.

Chapter 3: Research Methodology

This chapter introduces the research methodology used in this research. The first section of the chapter places the study in relation to traditional research paradigms, and a justification is provided for the stance taken in this research. The second part of the chapter discusses the research design of the study. Then, the sampling theory and data collection of the study are discussed. Thereafter ethical considerations are considered. An explanation of the measures used then follows. Issues relating reliability and validity are also discussed. The final section of the chapter relates to the statistical methods used to test each hypothesis.

Chapter 4: Research Findings

In this chapter the results of the research are reported. The first part of the chapter deals with pre-testing of the instrument (Cronbach's alpha) as well as the testing of the final instrument. In next section of the chapter the descriptive results are first reported. After this, the bivariate (Pearson's product moment, Kendall's Tau and Spearman correlation coeffient) and multivariate multiple linear regression) results are reported in relation to each of the tested hypotheses. In order to validate the results of the tests carried out, data was transformed (log transformation and square root transformation). Outliers were then identified and removed and regressions were then carried out after each transformation and removal of outliers. The results were tabulated for comparison purposes. The chapter concludes with the reporting of the results of T- tests carried out to identify the differences across the three generations under study.

Chapter 5: Discussion of Results

The results reported in Chapter 4 are discussed in relation to the literature in this chapter. First, the results of the testing of the hypotheses using a bivariate and multivariate analysis are discussed. The first discussion relates to the relationship between cohort membership and sources of motivation. This is done in relation to literature. Next to be discussed is the relationship between cohort membership and work values.

The results of the testing of the hypotheses that relate to the relationship between cohort membership and organisational commitment are then discussed. The results of the testing of the hypotheses that relate to cohort membership and job satisfaction are also considered.

The testing of results relating to the association between sources of motivation and organisational commitment is discussed followed by a discussion of the relationship between sources of motivation and job satisfaction. The final section in the testing of hypothesis related to the results of testing of hypothesis that relate to the association between work values and organisational commitment as well as work values and job satisfaction. A section that deals with the implications of the study is also found in this chapter.

There is a discussion on the following issues as they relate to generational differences and Human Resources Management: Recruitment and selection, training and development, reward management, career development, performance management, management styles and leadership and loyalty towards the employer. The chapter concludes with the limitations of the study.

Chapter 6: Conclusions

The objectives of this chapter are to summarise the research to make recommendations for theory and practice. Therefore, in this chapter a summary of the research, aims and objectives and of the empirical findings are provided. Recommendations are made for practice and for further research.

CHAPTER 2

LITERATURE REVIEW

2.1.0 Introduction

The purpose of this literature review is to investigate the relationship between sources of motivation, work values, organisational commitment and job satisfaction as they relate to generational differences. First, literature on generational differences is explored followed by a discussion of motivation, work values, organisational commitment and finally job satisfaction. A discussion of the relationship between the variables completes the literature review.

2.1.1 Theoretical differences of generations.

The theory on generational differences has its early origins in sociology, specifically in the work of Karl Mannheim (Lyons, Duxbury & Higgins, 2005) who discussed it in his seminal paper, "The problem of generations." In attempting to explain the political attitudes of German youth after World War I, Mannheim (1952) proposed that groups of people are strongly influenced collectively by historical events they would have witnessed during their early years of life. From these early experiences, distinct cohorts and generational groups emerge. The concepts of cohorts and generational differences have been widely researched on after Maed (1970) coined the term "generation gap to describe the different beliefs and attitudes of the post war Baby Boomer generation and the generation that preceded this group (Lyons et al., 2005).

Mannheim (1952) suggested that an examination of generations would assist in understanding the structure of social movements. He also defined a generation as being similar to the class position of an individual in society in that a generation is not a concrete group, that is, members do not even know who the other members are (Mannheim, 1952). Mannheim, however, argues that individuals cannot be members of the same generation by simply sharing a birth year. The members must participate in certain shared experiences so that a common thread in behaviour can be identified in them, influenced by their common experiences (Mannheim, 1952).

Mannheim's theory of generations has been refined by Eyerman and Turner (1998, p. 93) who define generations as:

> *"Cohort of persons passing through time who come to share a common habistus and life style… has a strategic temporal location to a set of resources as a consequence of historical accident and the exclusionary practices of social closure."*

As a construct, a generational cohort refers to an "identifiable group that shares birth years, age, location, and significant life events, at critical developmental stages" (Kupperschmidt, 2000, p. 66).

Many of the studies on generational differences both quantitative and qualitative have been inconclusive in their findings, with most producing mixed results (Lyons et al., 2005). Kunreather (2003) conducted interviews with representatives of three generations of non-profit making organisations and found more similarities than differences, but the study found differences between Baby Boomers and Generation X in motivation to work and concerns about work-life balance. Gursoy, Maier & Chi (2008) used in-depth focus groups to examine the characteristics that defined each generation. The findings indicated significant differences in the generations' attitudes towards authority.

Differences between generations are proposed to be caused by different experiences members go through in their formative years, experiences that impact on the development of personality, values, beliefs and expectations (Lyons, et al., 2005). A generational group is composed of individuals who share significant historical experiences; whose effects are relatively long lasting (Zemke et al., 1999). The experiences then influence an individual's feelings toward general aspects of life, for example, attitudes towards authority, what a person values from work and how a person plans to satisfy those desires (Jurkiewicz & Brown, 1998).

A number of publications have emerged recently on the issue of generational differences at the workplace (Zemke et al., 1999; Lancaster & Stillman, 2002). The main assumption of these publications is that there are fundamental differences between the younger generation of workers ('Generation X') and their older colleagues (the 'Baby Boom' generation) with respect to their expectations and attitudes toward work (Lyons, et al., 2005).

It is further argued that these differences have significant implications for the successful recruitment, motivation and retention of employees from different generational cohorts (Zemke et al., 1999).

As the large Baby Boomer cohort moves closer to retirement, the succession debate is an issue that needs to be addressed in order to bridge the gap that the Boomers will leave behind. It is, however, important to recognise and make full use of the knowledge and experience of the older generation of employees in the final stages of their careers (Lyons et al., 2005). Literature on generational differences in work values and other related constructs is largely anecdotal or opinion based, and few researchers have attempted to investigate such differences empirically (Karp & Sirias, 2001).Generational literature consistently mentions four generations of individuals that comprise the modern labour force. There is, however, no consensus among authors with respect to the labels given to the various generations and the age boundaries that divide the generational cohorts (Lyons et al., 2005).

Table 2-1Generational labels below.

Author(s)	Definition of generation
Cennamo and Gardner (2008)	Baby Boomers 1946-1961 Generation X 1962-1979 Generation Y 1980+
Chen and Choi (2008)	Baby Boomers 1946-1964 Generation X 1965-1977 Generation Y 1978+
Gursory et al. (2008)	Baby Boomers 1943-1960 Generation X 61-1980 Generation Y 1981
Jurkiewecz (2000)	Baby Boomers 1946-1962 Generation X 1963-1981
Lyons et al. (2007)	Baby Boomers 1945-1964 Generation X 1965-1979 Generation Y 1980+
(2000)	Baby Boomers 1946-1964 Generation X 1965-1977
Wong, Gardner, Lang and Coulon (2008)	Baby Boomers 1945-1964 Generation X 1965-1981 Generation Y 1982-2000

Parry and Urwin 2011

Based on the above, generations will be categorised as follows: Matures are those people born prior to 1945; Baby Boomers are those born between 1945 and 1964; Generation X are those born between 1965 and 1979; and Generation Y (Millennials) are those born in 1980 or later. The generational literature provides a fairly consistent set of stereotypes of the work values attitudes and behaviour of the various generations. The purported work values of each generation are reviewed briefly below.

2.2.0 Labels of generations

2.2.1 Matures/Veterans.

The eldest generation of employees, have been labelled in American literature as the Veterans, and they consist of those individuals born prior to the end of World War II. Their formative experiences include the Great Depression and the horrors of WWII. These experiences are said to have given this generation a strong sense of duty and an appreciation of the value of hard work (Kupperschmidt, 2000; Lancaster & Stillman, 2002).

Veterans are proposed in the literature as valuing loyalty, dependability and persistence in their work (Zemke et al., 1999; Kupperschmidt, 2000). It is argued that the Veterans view work as a duty rather than as a source of meaning, fulfilment and social interaction (Lyons et al. 2005). Veterans are said to subscribe to the traditional psychological contract whereby a good day's pay and recognition from authority are the rewards for a hard day's work (Kupperschmidt, 2000; Lancaster & Stillman, 2002). Rousseau (1995) describes the psychological contract as what is implicit in terms of reciprocity and exchange within the employment relationship. With respect to the characteristics of the psychological contract, Rousseau (1995) argues that in essence it is a subjective perception which differs between individuals. Veterans are also said to believe in a command and control view of leadership; whereby strong leaders are viewed as integral to performance (Zenke et al., 1999; Kupperschmidt, 2000; Lancaster & Stillman, 2002). In the South African context, the Veteran generation is the most traditional. Most of what they know relates to apartheid (Swanepoel, et al., 2008).

2.2.2 Baby Boomers.

Baby Boomers are the product of the post-WWII boom in birth rates in North America (Zemke et al., 1999). They were raised at a time of economic prosperity, when parents could afford to have more children (Lyons et al., 2006).

They were cherished as children and this led them to have, a 'psychology of entitlement' as they grew to adulthood (Kupperschmidt, 2000; Strauss & Howe, 1991). With respect to work, the Baby Boomers are generally depicted as 'workaholics' who live to work and relentlessly pursue success and achievement (Zemke et al., 1999; Kupperschmidt, 2000). They are also said to be highly competitive because of the size of their birth cohort, which has made it necessary for them to compete for opportunities, resources and attention throughout their lives (Lancaster& Stillman, 2002). Boomers are said to place great value on their careers as a central focus in their lives (Smola & Sutton, 2002) and as a source of meaning and personal fulfilment (Kupperschmidt, 2000; Lancaster & Stillman, 2002).

At work, Baby Boomers are described as highly competitive, micro managers that despise laziness and have a, 'do whatever it takes" attitude towards personal growth, (Crumpacker, & Crumpracker. 2007). Baby Boomer general values are tolerance, power, authority, achievement, and work is the most important activity in their lives hence the term work alcoholics is used to describe the cohort (Zemke et al., 1999).

This group probably makes up the bulk of the South African labour force (Swanepoel et al., 2008). This, however, is contested by Statistics South Africa figures (2011) which put generation X as the largest group. The name Baby Boomers has been taken from the western context (USA) and in SA this generation is not associated with the boom in babies born. However the adoption of this term to describe people born between 1945 and 1964 has been widely used in literature hence its use in this study. In the USA after World War two, education became a top priority for the Veterans and their children, but in South Africa the majority of them were prevented by apartheid policies from enjoying proper education or economic prosperity (Swanepoel et al., 2008). In South Africa, these are the people who fought most of the struggles. According to Swanepoel et al. (2008) this cohort does not fear and tends to take risks.

Most of the women are house wives, resulting in this generation believing in gender roles (Swanepoel et al., 2008). Swanepoel et al. (2008) further states that Boomers in South Africa have to deal with their aging parents on one side and their adult children on the other. They, therefore, face stresses, time demand and money constraints (Swanepoel et al., 2008). In terms of technology, the group both in South Africa and elsewhere (to varying degrees though), is less high tech driven since the technological revolution found some of them already grown up. The Baby Boomer generation in South Africa may thus be different from those in the West (USA, and UK). However what may be common between the groups could probably be the struggles that both groups went through; in America the civil rights movements and in South Africa struggles against apartheid. These struggles have led the Baby Boomer group to have certain values (Lyons et al., 2006).Baby Boomers' core values have been described as optimism, team orientation, personal gratification, health and wellness, personal growth and an obsession with youth (Zemke et al., 1999). They place emphasis on a sense of accomplishment, achievement and social recognition. They regularly work 50–60 hours per week (Carlson, 2004; Berl, 2006). Baby Boomers place a higher value on work itself than the later generations and receive higher levels of job satisfaction in general. They value warm, friendly relationships with co-workers (Jurkiewicz & Brown, 1998). The rationale is that all this literature stresses that these differences do exist. Knowing what they are is important for the development of HR practices that take into account these differences. According to Zemke et al. (1999 p. 66), the generation's personality was formed by the following events in America:

Table 2-2: Cohort forming events for Baby Boomers in America below.

Year	Event
1954	McCarthy HCUAA hearings
1955	Rosa Parks refused to move toward the back of a bus in Alabama
1957	First nuclear power plant
1960	Birth control pills were introduced
1960	Kennedy was elected
1962	Cuban Missile Crisis
1962	John Glenn circled the earth
1963	President Kennedy was assassinated
1965	Vietnam
1968	Martin Luther King and Robert Kennedy were assassinated
1969	Woodstock;
1970	Kent State University shootings

Source: Zemke et al., (1999)

The Baby Boomer heroes were; Gandhi, Martin Luther King, John and Jacqueline Kennedy, and John Glenn (Zemke et al., 1999).

According to Zemke et al., (1999), Boomers work for all types of organisations, the key being opportunity. They prefer democratic and casual environments, but can be found in all types of industries. On the job they are seen as service-oriented, driven, willing to 'go the extra mile', good team players, uncomfortable with conflict, reluctant to go against peers, overly sensitive to feedback, judgmental of those who see things differently and self-centred (Zemke et al., 1999 p. 70).

2.2.3 Generation X.

Generation X grew up in a period of low birth rates, increasing divorce rates, controlled government spending, economic recession and high rates of unemployment (Zemke et al., 1999). It has been widely argued that these negative experiences have made Generation X pessimistic and self-reliant (Howe & Strauss, 1993; Kupperschmidt, 2000; Lancaster & Stillman, 2002). With respect to work, Generation X are seen as independent and entrepreneurial, with an unwillingness to commit to organisations resulting from their having seen their parents getting retrenched despite several years of loyalty to organisations (Tulgan, 1997; Kupperschmidt, 2000). Generation X are said to place great value on opportunities for intellectual development and learning in their work and desire rapid promotion based on their knowledge (Zemke et al., 1999; Lancaster & Stillman, 2002.). It is also argued that Generation X place an emphasis on the social aspects of the workplace, seeking a work environment where they can form friendships and have fun (Losyk, 1997; Lancaster& Stillman, 2002.).This generation has been described as lazy, task oriented, independent, entrepreneurial, and sceptical about authority, prefer autonomy and flexibility and value work-life balance (Zemke et al., 1999).

Because they value work-life balance, Generation X is generally described as having been raised with a silver spoon in their mouth, and this has led them to have some psychology of entitlement (Kupperschmidt, 2000).

This generation is often seen as less loyal and sometimes described as job hoppers. Zemke et al., (1999) argue that the high rate of divorce and increased number of working mothers impacted on this generation and led to them being characterised by traits of independence, resilience and adaptability. They are part and parcel of the technology revolution and are willing to learn new things (Swanepoel et al., 2008). In South Africa, this group witnessed the end of apartheid when they were still young and have thus lived through a lot of changes. They are therefore, more adaptable and can work better in multi-cultural settings (Swanepoel et al., 2008).

They are independent and resourceful, comfortable with diversity, value integrity and expect a balanced lifestyle (Bova & Kroth, 1999). Much of the literature on Generation X emphasises the need to be cautious in characterising them because there is stereotyping of this group as getting bored quickly, having a short attention span, expecting immediate gratification and distrusting institutions (Filipczak, 1994; Caudron, 1997). Tulgan (1997) noted that some commentators also suggest that they have been perceived as lazy, disloyal and arrogant, cynical, contemptuous, unfocused and materialistic. Research however, has shown that they are actually self-reliant rather than arrogant, adaptable to change rather than disloyal and prefer to learn by assimilating information from multiple sources (Parry & Urwin, 2009). Generation X values a sense of belonging and teamwork, the ability to learn new things, autonomy and entrepreneurship, security and flexibility (Parry & Urwin, 2009). They tend to be sceptical about the status quo and hierarchical relationships and believe a manager must earn respect rather than deserve it by virtue of their title, (Tulgan, 1997). Hornblower (1997) argues that, contrary to popular belief, generation X is actually more competitive, risk taking, and success-minded than Boomers. Generation X's assets are adaptability, technological literacy and independence and their liabilities are impatience, poor people skills, inexperience, and cynicism (Hornblower, 1997).

Tulgan (1997) characterises Generation X as feeling misunderstood and mismanaged, while managers have trouble understanding them. Managers see them as arrogant, disloyal critics with short attention spans and unwilling to commit to anything (Jurkiewicz, 2000). Tulgan (1997), earlier argued that generation X is sceptical about institutions in general and cautious about investing time and energy without promised reward. The real difference that sets them apart from the previous generations is that a job is just a job and that there is a life outside of work (Herley, 2007).

According to Zemke et al., (1999 p. 95), the following are some of the influential events that effected Gen X in America.

Table 2-3: Cohort forming events in for generation X in America below

Year	Event
1970	Women's Liberation protest
1972	Arab terrorists at Munich Olympics
1973	Watergate scandal
1973	Energy crisis began
1976	Tandy and Apple PCs
1979	Three-Mile Island nuclear reactor nears meltdown
1979	Massive corporate layoff
1980	John Lennon shot and killed
1986	Challenger disaster
1987	Stock Market crash
1988	terrorist bomb blew up flight 103 over Lockerbie
1989	Fall of Berlin Wall
1991	Operation Desert Storm
1992	Rodney King beating videotaped, and Los Angeles riots

Source: Zemke et al., (1999)

According to Zemke et al. (1999, p. 95) Generation X's heroes list is a short one, NONE. Generation X grew up watching corporate downsizing and their parents losing their jobs (Zemke et al., 1999). As Generation X came of workforce age they became highly adaptable and some kind of nomadic corporate worker, jumping from entry-level job to entry-level job and not showing any "company loyalty"(Zemke et al., 1999, p.95). Company loyalty is not even in the vocabulary for Generation X since events throughout their lives taught them to look out for themselves because no one was going to do it for them (Herley,2007).

On the job, they are seen as adaptable, technologically literate, independent, not intimidated by authority, creative, impatient, having poor people skills, and even cynical (Zemke et al., 1999).

2.2.4 Generation Y

The youngest generation, Generation Y, had formative years characterised by economic prosperity in America, technological advances and globalisation (Herley, 2007). This generation has been profoundly shaped by the influence of the internet and other information technology innovations that have taken place recently. This has provided them with entirely new ways of thinking and communicating (Tapscott, 1998).

Although not much is known about this generation at work since they have just entered the workforce, a number of stereotypical characterisations have been suggested (Lyons et al., 2005). Zemke et al., (1999) argued that Generation Y are highly achievement-oriented and have demonstrated a willingness to work hard and long at the expense of their private lives in order to attain success. Lancaster and Stillman (2002) have suggested that Generation Y define success largely in materialistic terms and that they are particularly interested in status and prestige in their careers. Generation Y are also said to view frequent change as positive and desirable, which causes them to become easily bored and makes them unwilling to stay in a single job for long (Lancaster & Stillman, 2002; Smola & Sutton, 2002).

Because of their openness to change, Generation Y is described as a generation that appreciates the opportunity to provide input and is also said to be technologically dependent, multi-tasking, group oriented and wants work-life balance (Smola & Sutton, 2002). Their general values are stimulation, self-direction, and hedonism (Parry & Urwin, 2011).This group is now entering the workforce in large numbers and will become the key force throughout the first quarter of the twenty-first century (Swanepoel et al., 2008).

The twenty-first century has been characterised by massive technological advancement especially in communication. The majority of the latest generation has been raised against the idea that they can do anything; they are seen as a self-confident group and can be very demanding (Swanepoel et al., 2008). Technology is almost second nature to them. According to Swanepoel et al. (2008) in South Africa most of them did not really experience apartheid and have had the chance to vote for their leaders. Having lived through the changes that have taken place in South Africa, they want rapid improvement for all. Swanepoel et al. (2008) argue that some members of this group feel that their turn has come, while others feel that they are suffering for the sins of their fathers.

Generation Y has been defined in the United States of America as valuing work-life balance, life styles and career development more than other generations (Zemke et al., 1999). They have also been described as the most technologically adaptable and are said to value intrinsic aspects of work such as mentoring and training in order to remain marketable (Loughhin & Barling, 2001). Clausing, Kurtz, Prendeville and Walt (2003), later pointed out that generation Y has always known their world to have Acquired Immune Deficiency Syndrome, answering machines, micro-wave ovens, and video recorders or Digital Video Discs. The fast nature of their way of living has resulted in them being described as impatient. According to Zemke et al. (1999) Generation Y's assets include, optimism, tenacity, heroic spirit, multi-tasking capabilities, and being technologically savvy. Their liabilities include a need for supervision, and inexperience, particularly in interpersonal issues. This group has the largest diversity of parents yet (Zemke et al., 1999). Some of their parents come from Generation X, and others are Boomers. Their age ranges from adolescents to mid-lifers. Zemke et al. (1999, p. 128) states the following about this generation:

"For the first time in history, kids are the authority. They know far more than their parents about one of the basics such as technology and the internet. As always, parents know more about most things; but today, as never before, kids actually know more about technology, and are teaching and coaching their parents."

According to Zemke et al. (1999) some events that affected Generation Y in America are: the Oklahoma City bombing, school-yard shootings, technology, over-planned lives, stress, Clinton/Lewinsky, Columbine High School massacre. In South Africa the release of Nelson Mandela from prison stands out as possibly cohort forming. Some of the Generation Y heroes are Michael Jordan, Princess Diana, Mother Teresa, Bill Gates, Tiger Woods, and Christopher Reeves (Zemke et al., 1999). This is the group with the greatest amount of exposure to multiculturalism and as such can be described as the global generation (Zemke et al., 1999).Generation Y is a more global generation than any previous generation (Clausing et al., 2003).

Generation Y will be the first generation to seriously question all traditional racial categories, and the reason is that many of today's children and teens are of mixed races (Zemke et al.,1999). With the technology available to them, they can communicate with people throughout the world.

They are tolerant of different cultures, accepting of blended families and divorce and do not care much about gender, race, living arrangements and socio-economic status (Zemke et al., 1999). Clausing et al. (2003) also state that this generation appears to be the most ideal work force. They combine work ethic of the Baby Boomers with the can-do attitude of the veterans and the technologically savvy generation X (Clausing et al., 2003).

2.3.0 Proposed causes of generational differences and criticisms

2.3.1 Age and life stage differences.

Polach (2006) argues that it may be that some of the differences thought to be generational differences can be ascribed to age and to life and career stages in contrast to generational cohorts. While personality characteristics may remain stable, people generally change what they want from their jobs over time as they progress from entry-level jobs to established positions, mix family and career interests, and move on to retirement (Polach, 2006). Individuals' concern for particular benefits shifts throughout life depending on the age of the employee. For instance, Baby Boomers are now reported to be concerned with retirement issues while Generation X want childcare and Veterans want secure pensions (Polach, 2006). These variations in what employees want from their jobs may be viewed within the context of the employee life cycle. As employees enter the workforce, they may prefer certain benefits over others, and these preferences will change as they get older and as their situation in life changes (Jurkiewicz, 2000). Giancola (2006) also casts some doubt on generational differences, citing the fact that beliefs and attitudes change over an individual's life span. Some behaviour, therefore, goes beyond generational values and can better be explained using life stages (Giancola, 2006).

According to Strauss and Howe (1991) generational differences are societal subcultures, which reflect the significant cultural, political, and economic developments that occurred during a generation's formative years.

In comparing generational differences and life stages, Lyons, Duxbury and Higgins (2005) argue that the life-stage theory proposes a universal developmental sequence throughout the human life cycle (childhood, adolescence, early adulthood, middle adulthood, and old age).

The theory's main argument is that as people age, they become more conservative and less individualistic (Lyons et al., 2005)

Table 2-4: Common life stages below.

Life stage	Age	Behaviour
Youth	0-21	A period of learning and growth
Rising adulthood	22-35	Priority placed on establishing career and family and the pressure to balance these needs.
Midlife	36-50	Characterised by the desire for more leadership opportunities and a fuller desire to parent and mentor plus the pressure to "have it all."
Legacy	50-70	A period of reaffirming values and a strong pressure to keep what has been earned
Elder hood	Aged 70 and over	Focused on the 'giving back' and passing on values and methods.

Source: Zemke et al. (1999)

The idea that employees' values and needs change according to life stage was reflected in a recent Chartered Institute of Personnel Development (CIPD) research into managing an ageing workforce (CIPD, 2008b). The results of a focus group of older workers within the cosmetics company Molton Brown showed that workers who were nearing retirement often placed a higher emphasis on flexible working arrangements and social opportunities at work rather than salary. The group explained that they had fewer commitments such as childcare or mortgages than they had earlier in their working lives, so they now wanted to have more time away from work, to enjoy their income before retirement (CIPD, 2008b).

Older workers also enjoyed social opportunities at work, with over a third of respondents in a CIPD (2008) survey stating that the reason they would work after retirement age was for social interaction. These findings contradict much of the literature on generational differences that suggests that younger employees from Generation X or Y are more focused on flexible working or social opportunities at work, therefore, casting some doubt on the validity of the espoused generational differences (Parry & Urwin, 2011).

According to Cherrington (1980) some generations would be expected to value intrinsic rewards over extrinsic rewards. Cherrington studied this phenomenon among 3,053 Americans who represented three age groups (17-26, 27-40, and 41-65 years of age) and concluded that younger workers placed greater emphasis on the importance of money, (extrinsic rewards), when compared to their older counterparts. Smola and Sutton (2002), using the 'desirability of work outcomes' scale, studied differences between Baby Boomers and Generation X and found that Generation X displayed a stronger desire to be promoted more quickly than Baby Boomers.

From the above studies and the stereotypes that suggest that younger workers are achievement oriented, older workers would be expected to have a strong desire for intrinsic rewards of work. According to Cherrington (1980), the stereotypical generational groups would be expected to differ in their beliefs that work is inherently enjoyable and that one should be recognised for doing a good job. In trying to explain whether these beliefs can be said to collectively reflect one's "pride in craftsmanship," Cherrington (1980) found significant differences across three age groups that were studied. Younger workers felt that "pride in craftsmanship" was less desirable, having leisure and free time was more desirable, and that doing a poor job was more acceptable (Cherrington, 1980). In contrast, Smola and Sutton (2002) found no significant differences between Baby Boomers and Generation X in "pride in craftsmanship." Based on the above studies, the controversy on generational differences still rages on.

The importance of differentiating between the two drivers of differences (age and generational differences) is debatable. However, as suggested by Parry and Urwin (2011) it may be a little simplistic to consider these separately and there may be some value in combining an understanding of life stages with the generational approach.

It may be actually be more beneficial to combine the approaches in order to have a better understanding of the dynamics of diversity issues at the workplace today (Parry & Urwin, 2011).

2.3.2 Criticism of studying generational differences

The theoretical assumptions on which generational differences are based are not, however, without criticism.

While the idea that there are specific generational groups with shared beliefs is generally accepted, many have acknowledged that the extent to which these groups completely share beliefs should be viewed with some caution (Giancola, 2006). In other words, the experiences that develop the shared perspectives among a generation are viewed through diverse socio-economic, political, and racial lenses (Parry & Urwin, 2011). Therefore, it may be difficult to point to an absolute generational group that is defined by a set of shared experiences (Polack, 2006).

There are, for example, problems in determining the exact point at which to separate the various generations (Giancola, 2006). It can also not be assumed that all members of any given generation will experience the same key life events in the same way, which is independent of differences such as social class, gender, ethnicity, or national culture (Giancola, 2006). Earlier, Rhodes (1983) argued that it is difficult to single out differences attributed to generational cohort membership from what may, in fact, be differences arising from age (maturity), career or life-cycle stage. Consistent with age are organisational tenure, differences giving rise to different organisational experiences, which also impact on many of the attitudinal variables of interest to generational researchers (Rhodes, 1983).

Giancola (2006) criticised the commonly used boundaries of generations on a number of grounds. First, he pointed out that there was little agreement about the beginning of the Baby Boomer generation, with authors indicating this as being 1943 or 1946, depending on whether the author focused on demographics (1946 represented a surge in births in the USA) or formative experiences. In addition, some experts have added a fifth generation, the 'Swing Generation', as part of the Veteran cohort, and others have commented that those born near the beginning or end of a generation do not resemble those born about the middle, thus casting doubt on the concept itself (Giancola 2006).

In particular, Giancola (2006) suggests that, as the Baby Boomer generation covers 19 years, it should be split into smaller groups.

The definition of generations is not an exact science, but the fact that different scholars have defined particular generations differently may explain, to some extent, why there is no consistent evidence regarding the existence and nature of generational differences (Parry & Urwin, 2011).

2.3.3 Possible cohort forming events in South Africa.

In South Africa some of the events that may have been cohort forming are events such as the Sharpeville Massacre of 1960 where at least 180 Africans were injured and 69 killed when South African police opened fire on approximately 5000 demonstrators, who were protesting against the pass laws, at the township of Sharpeville, near Vereeniging in the Transvaal (Gerhart, Carter & Karis., 1992). The Sharpeville Massacre, as the event has become known, triggered the start of armed resistance in South Africa, and prompted worldwide condemnation of South Africa's apartheid policies. Such an event can be thought of as cohort forming. It was a turning point in South African history (Gerhart et al., 1992). The government immediately declared a state of emergency, banned political meetings and within less than a month, both the Pan-Africanist Congress and the African National Congress were banned, and the armed struggle started (Gerhart et al., 1992). The 1976 Soweto uprising when students were killed by the police as well as Mandela's release from prison in 1990 are significant events for the history of South Africa. The question as to whether the different races and socio-economic classes were affected in the same manner is debatable.

For cohorts to form, Schewe and Meredith (2004) argue that some key requirements must be present. These are; mass communication capability, literacy and social consequence (Schewe & Meredith, 2004).For the impact of a defining moment to be felt by a society, that event must be conveyed to them. Access to information, however, is not the same in every country. In explaining the importance of literacy, Schewe and Meredith (2004) state that education affects all aspects of a country's culture, from economic development to consumer behaviour. In countries where illiteracy is high, many individuals may not understand the implications, or impact of a defining event, thus, it is unlikely that the event will influence their behaviour, (Schewe & Meredith., 2004, p. 53).

Defining moments also need to have societal consequences for them to be cohort forming, for example, although the Death of Princess Diana was emotional, it is unlikely to be a cohort defining moment because it did not have much social impact (Schewe & Meredith., 2004, p. 54). The recent wedding of Prince William may have been watched by millions across the world, but it is unlikely to be cohort forming. The question, therefore, to ask is whether cohort analysis is possible in underdeveloped countries or developing countries where illiteracy is high and communication slow.

The other problem is whether generational labels used in America can also be used to segment various age groups globally. Schewe and Meredith (2004) argue that the answer depends on which age group is considered and which countries. The USA and the UK share many similarities in terms of defining moments, and cohort values (Scott, & Zac., 1993). The Great Depression, the Second World War and the Cold War were all important events that shaped the coming of age years of youths in both countries (Schewe & Meredith., 2004).

2.3.4 Summary of generational differences

The above section examined theory relating to generational differences. The three generational cohorts that make up the general workforce today were identified and stereotypes relating to these generations highlighted. Cohort forming events in America and possible cohort forming events in South Africa were identified. Criticisms of the study of generations were highlighted. The next section examines early theories of motivation.

2.4.0 THEORIES OF MOTIVATION

2.4.1 Early developments in the theory of motivation

The term "motivation" was originally derived from the Latin word *movere* which means "to move," (Steers & Porter, 1983, p.3). A number of authors have however come up with different definitions of the construct, some of which are given below:

2.4.2 Definitions of motivation

Table 2-5.Definitions of Motivation below.

Author	Definition
Atkinson, (1964.).	The contemporary (immediate) influences on the direction, vigour, and persistence of action.
Jones (1955).	How behaviour gets started, is energised, is sustained, is directed, is stopped, and what kind of subjective reaction is present in the organism while all this is going on,
Vroom (1964).	A process governing choices made by a person or lower organisms among alternative forms of voluntary activity
Campbell and Pritchard (1976).	Motivation has to do with a set of independent/dependent variable relationships that explain the direction, amplitude, skill, and persistence of an individual's behaviour, holding constant the effects of aptitude, skill, and understanding of the task, and the constraints operating in the environment
Robbins, Judge, Millett, Waters-Marsh, (2008)	The process that account for an individual's intensity, direction and persistence of effort towards attaining a goal.

According to Steers and Porter (1983), the above definitions appear to have three common factors, which may be said to characterise the phenomenon of motivation.

(a) What energises human behaviour?

(b) What directs or channels such behaviour?

(c) How this behaviour is maintained or sustained?

When one analyses these three factors, a common thread points to; central energetic forces within individuals that drive them to behave in certain ways and to environmental forces that trigger these drives, (Steers & Porter, 1983). The other notion is that of goal directedness on the part of the individual and that the behaviour is directed towards something. Steers and Porter (1983) also observe that this way of viewing motivation contains a "systems orientation," that is, it contains those forces in the individuals and their environments that feedback to the individual either to reinforce the intensity of their drive and the direction of their energy or to discourage them from their course of action (Steers, Mowday & Shapiro 2004).

Most psychological theories on motivation, both early and contemporary have their roots in the principle of hedonism (Steers & Porter, 1983). This principle states that individuals tend to pursue pleasure and avoid pain (Steers et al., 2004). In theory people rationally consider the behavioural alternatives available to them and choose the alternative that produces positive results and minimise negative results (Steers & Porter, 1983).Towards the end of the nineteenth century, a new science of psychology emerged and took up the study of motivation, (Steers & Porter, 1983). Hedonism was criticised, with Vroom (1964, p. 10) declaring that hedonism "had no clear-cut specification of the type of events that were pleasurable or painful, or even how these events could be determined for a particular individual."

Behaviourists started to search for new models to explain the concept, and the instinct theory was proposed by psychologists such as James, Freud and McDougall, who argued that a more comprehensive explanation of behaviour was necessary rather than relying on hedonism alone (Steers & Porter, 1983). Instead of seeing behaviour as being highly rational, these theorists saw much of it resulting from instinct.

By the early 1920s however, some limitations of the instinct theories were identified and this led toward the development of new theories by psychologists such as Thorndike (Steers & Porter, 1983). His argument was that an individual's decision concerning present and future behaviour depended largely on the individual's experience.

Past behaviours that led to positive outcomes were more likely to be repeated and those that led to negative outcomes would be less likely to be repeated. Thorndike (1911) called this the law of effect. Skinner (1953) introduced what became commonly referred to as reinforcement theories, which state that individuals tend to learn the relationship between their actions and consequences and the outcomes guide future behaviour (Steers & Porter, 1983).

Around the 1950s new models of work motivation emerged, collectively known as content (or need) theories, which focus on factors internal to the individual, that energise and direct behaviour (Steers et al., 2004). These theories regard motivation as the outcome of internal drives that compel an individual to act to satisfy the needs (Steers & Porter, 1983). These theories were followed by what became known as process theories.

Process (or cognitive) theories of motivation focus on conscious human decision-making processes as an explanation of motivation (Steers & Porter, 1983).According to Steers and Porter (1983) cognitive theorists attempt to develop models concerning cognitive processes people go through as they decide the extent to which they participate in the work place The process theories are concerned with determining how individual behaviour is energised, directed, and maintained (Steers & Porter, 1983).

2.4.3 CONTENT THEORIES

2.4.4 Maslow's hierarchy of needs

One of the most influential writers on motivation was Maslow (1964) who came up with what is now known as Maslow's hierarchy of needs. Maslow separated the five needs into higher order and lower order needs. Physiological and safety needs were described as lower order needs and social, esteem and self-actualisation as higher-order needs. According to Maslow, physiological needs are those needs that are usually taken as the starting point for the motivation theory, and they are known as physiological drives. Maslow proposes that physiological needs are the source of all needs (Steers, Mowday & Shapiro., 2004).

Maslow states that a human being that is missing most things in life would most likely be affected by these physiological needs (Steers et al., 2004).

A person who is lacking in food, safety, love and esteem would therefore, most probably hunger for food more strongly than for anything else (Maslow, 1964).

Maslow (1964) further asserts that once the physiological needs are satisfied, other needs emerge and these needs then dominate the human being. In terms of the hierarchy of needs, safety needs follow. If the physiological needs are relatively satisfied, a new set of needs emerges which have been be categorised as safety needs, (Maslow, 1964). These needs may include security, stability, protection and freedom from fear. The whole process starts all over again with safety needs (Maslow 1964). The human is dominated by these needs. The needs may serve as the most exclusive organiser of the human being's behaviour and the human being may be described as a safety seeking individual (Maslow, 1964).

If the physiological needs and safety needs are satisfied, there will emerge the love and affection needs (Maslow, 1964). The fourth category is referred to as the esteem needs which may be the desire for strength, achievement, adequacy, mastery, competence, and confidence in whatever an individual may be doing. Esteem needs may concern the desire for reputation, or prestige, status, fame, and glory (Maslow, 1964.). Satisfaction of the self-esteem needs leads to feelings of confidence, worth, and adequacy. Maslow calls the final set of needs self-actualisation. Humans must be true to their own nature. The term refers to people's desire for self-fulfilment, namely, the tendency for them to be actualised in what they are potentially (Maslow, 1964.). Maslow's theory has however been criticised on a number of grounds.

According to Milkovich and Newman (1993), one of the problems with Maslow's explanation is that it is extremely hard to know which needs are dominant at any given time. When linked with the work environment, it is very difficult to determine how a work environment should be structured to improve performance (Milkovich & Newman. 1993). For example, research indicates that needs vary by age, geographic location, (urban or rural) socio-economic status, and gender (Lawler, 1971).

2.4.5 Aderfer's ERG theory

In response to criticism of Maslow's theory Alderfer (1969) developed the ERG (Existence, Relatedness and Growth) model which proposes a modified need hierarchy theory that basically compresses Maslow's five hierarchical levels into three, (Steers & Porter, 1983).

Specifically, Alderfer (1969) suggest the following three need levels;

- Existence needs; these include those needs required to sustain human existence. This category includes both psychological and safety needs as identified by Maslow.

- Relatedness needs; this category concerns how people relate to their surrounding social environment and includes the need for meaningful social and interpersonal relationships.

- Growth needs; this is the category thought to be the highest need category and includes the need for self-esteem and self- actualisation.

Alderfer (1969) suggests that individuals move up the hierarchy from existence needs to relatedness needs, to growth needs, as the lower-level needs become satisfied. In this respect, the ERG is similar to Maslow's hierarchy of needs (Steers & Porter, 1983). However, Alderfer's theory differs from Maslow's in two respects. The first difference is that Maslow argued that progression from one level within the hierarchy to the next was dependent upon the satisfaction of the lower-order needs (Steers & Porter, 1983).

Alderfer's theory in contrast suggests that in addition to this satisfaction-progression process, there is also a frustration-regression process, that is when an individual is continually frustrated in attempts to satisfy growth needs, the lower needs (relatedness needs) may re-emerge as primary and the individual redirects his or her efforts towards these lower-order needs (Steers & Porter 1983). The second difference is that unlike Maslow's original formulation, Alderfer's model suggests that an individual may pursue more than one need at the same time (Steers & Porter, 1983).

2.4.6 Hertzberg' two factor theory

The two-factor theory-also known as motivation-hygiene theory-was proposed by Herzberg in 1966. He carried out a survey of 200 accountants and engineers and derived the framework for his theory on work motivation. Based on his survey, Hertzberg (1966) proposed that employees tended to describe satisfying experiences in terms of factors that were intrinsic to the content of the job itself. These factors were then labelled 'motivators' and included such variables as achievement, recognition, responsibility, advancement, and growth (Steers & Porter, 1983).

In contrast, those experiences that were dissatisfying were called 'hygiene' factors, which were extrinsic to the job (non-job related) such as company policy, salary, co-workers relations, and supervisory style (Steers & Porter, 1983). The issue of pay however is debatable in as far as Herzberg's theory is concerned.

According to Milkovich and Newman (1993) one major difference that may be inferred from Maslow's theory and Hertzberg's theory is the role played by pay in motivation. Pay is likely to satisfy some of Maslow's needs. Milkovich and Newman (1983) argue that in contrast, Herzberg's work is often interpreted as if he argued that pay is solely a hygiene factor, and that pay is necessary at sufficient levels to thwart job dissatisfaction, but it is not appropriate to motivate behaviour. Milkvich & Newman (1983) argue that Herzberg's original work demonstrated that pay becomes significant as a source of satisfaction when it is perceived as a form of recognition or reward. In this context, pay is taken as a form of feedback or recognition for achievement (Milkovich & Newman, 1983). In this regard, such an approach would be in agreement with the Deci's (1975) Cognitive Evaluation Theory (CET) if pay is perceived not as controlling but as informational.

2.4.7 Achievement theory

McClelland (1953) and his associates developed a theory that focuses on three needs; achievement, power and affiliation. The three concepts are defined by Robins, Odendaal, and Roodt (2001) below:

(a) Need for achievement; the drive to excel, to achieve in relation to set standards. McClelland et al. (1953) defines this as *"behaviour toward competition with a standard of excellence."* A high need for excellence is characterised by a strong desire to assume personal responsibility for finding solutions to problems. (Steers & Porter, 1983).

(b) Need for power; the need to make others behave in a way that they would not have behaved otherwise.

(c) Need for affiliation; the desire for friendly and close interpersonal relationships.

According to McClelland (1953) there are people with a compelling drive to succeed. They strive for personal achievement, rather than for rewards of success. They have a desire to do something better than it has been done before (Milkovich & Newman, 1993).

This drive is the achievement drive. High achievers do not like success by chance. They prefer the challenge of working at a problem and accepting the personal responsibility for success or failure rather than leaving the outcome to chance or the actions of others (Steers &Porter, 1983). The other need identified by McClelland (1953) is the need for power.

The need for power is the desire to have an impact, to influence and control others (Robbins & Judge, 2008). Those high on power like to be in control and strive for influence over others. According to Robbins and Judge (2008) they prefer to be placed into competitive and status-oriented situations and tend to be more concerned with prestige than with effective performance. The final need is that of affiliation. Those high on affiliation strive for friendship, prefer cooperative situations rather than competitive ones, and want relationships that involve a high degree of mutual understanding (Robbins & Judge, 2008).

2.4.8 PROCESS THEORIES

The major process theories of motivation discussed below are: expectancy theory, equity theory, goal-setting theory, and the Cognitive Evaluation theory.

2.4.9 Expectancy theory

Although Vroom is credited as having introduced the Expectancy theory to the organisational setting, Steers & Porter (1983) argue that the theory was based on the work of Lewin (1938). Vroom's theory asserts that performance is a function of expectancy (the belief that effort leads to performance), instrumentality, (the belief that performance leads to rewards), and valence (the perceived value of the outcomes) (Porter, Brigley & Steers, 2003).

The theory argues that the strength of a tendency to act in a certain way depends on the strength of an expectation that the act will be followed by a given outcome, and on the attractiveness of the outcome to the individual(Porter et al., 2003). The theory further proposes that when instrumentality and valence are held constant, expectancy will be positively associated with the performance level (Porter et al., 2003).

Vroom's theory has generated some research on the subject, the majority of which suggests that there are difficulties encountered when testing the model (Steers &Porter, 1983).

The most difficult problem involves the concept of effort and motivation itself (Porter et al., 2003).The theory attempts to predict the amount of effort one will expend on a task. However, there seems to be no agreement on the meaning of effort. Porter et al. (2003) further point out that the theory as a process theory does not specify which outcomes are relevant to a particular individual in a particular situation. As a process theory, the expectancy theory assumes individuals to consciously calculate what to expect from their actions when a making a choice. However, as Porter et al. (2003) point out, individuals are not always conscious of their motives, and cognitive processes.

2.4.10 Equity theory

There are two models that have dealt with the concept of equity (Jacques, 1961; Adams 1963). Adams (1963) argues that individuals compare their inputs and outcomes to those of some other relevant person in determining whether they are equitably (fairly) treated. According to Equity theory, people compare the rewards they receive, relative to the effort they must make to receive those rewards, to some relevant other person or persons performing the same task in the same organisation or elsewhere. If the individual perceives some inequity, the result is motivation to reduce the perceived inequity (Adams, 1963).The key word though is 'perceived' where the inequity could result because some individuals evaluate and classify as inputs and outcomes factors that other individuals might consider irrelevant or unimportant. Adams (1963) however, notes that people can decide to deliberately distort their or another's inputs and or outcomes, attempt to change their or another's inputs or outcomes, change the comparison person, reduce their involvement in the exchange relationship or leave the field altogether (quit the job). All the above scenarios have negative implications for performance. Adams theory therefore attributes motivation to some external standard.

Jacques (1961) states that feelings of inequity do not depend on the existence of a relevant other whose input to outcomes ratio differs from the target person's ratio. Jacques (1961) suggests that the relevant equity comparison is an internal standard. The assumption is that individuals have some internal standard of fairness based on past experiences against which current conditions are compared to determine fairness of, for example, current pay (Milkovich & Newman, 1993).

2.4.11 Goal setting theory

Goal-setting theory is based on Ryan's (1970) proposition that conscious goals affect action. A goal is the aim of an action, for example, to attain a specific standard of proficiency, usually within a specified time, (Locke & Latham, 2006).Goal setting theory proposes that motivation to perform a task is regulated by conscious goals that individuals are focusing on to accomplish the task (Locke & Latham, 2006). In order for goals to affect performance, individuals or groups must be committed to attaining them (Erez & Zidon, 1984). Studies by Locke, Latham and Erez (1988) concluded that generally, goal commitment is highest when people think they can attain the goals. Moreover, Locke and Latham (1990) assert that monetary incentives strengthen goal commitment, only so long as people value money, and the amount of money is considered to be large enough.

A surprising finding of research on goal commitment by Latham and Lee (1986); Locke and Latham (1990) is that assigning goals to individuals generally leads to the same level of commitment and performance as letting individuals also participate in the setting of their goals or letting them set their own goals. Several factors have been identified to explain the effectiveness of assigned goals, (Locke & Latham, 1990). Firstly, goals are typically assigned by people with legitimate authority, for example, supervisors (Locke & Latham, 1990). Authority figures by nature of their position at work can have a powerful influence on a subordinate's compliance (Orne, 1962: Miligram, 1969).

2.4.12 Goal Mechanisms

Locke and Latham (2006) argue that goals affect performance in four ways. First, goals serve a directive function; they guide attention and effort toward goal-relevant activities and away from goal-irrelevant activities.

This effect occurs both cognitively and behaviourally (Locke & Latham, 2006). Second, goals have a stimulating function (motivation). High goals lead to greater effort than low goals. Third, goals affect persistence. When participants are allowed to control the time they spend on a task, hard goals prolong effort (LaPorte & Nath, 1976). There is often, however, a trade-off in work between time and intensity of effort (Locke & Latham, 2006).

Faced with a difficult goal, individuals have a choice to work quicker and more intensely for a short period or to work more slowly and less intensely for a long period (Locke & Latham 2006). Tight deadlines lead to a quicker pace than loose deadlines (Bryan & Locke, 1969. b). Fourth, goals affect action indirectly by leading to the arousal, discovery, and or use of new knowledge and strategies (Locke & Latham, 2006)

2.4.13 Importance of goal attainment

According to Locke and Latham (2006) it is important to convince people that goal attainment is important. Making a public announcement to the goal attainment increases commitment, possibly because it makes the attainment of goals a heroic activity in one's own eyes and in those of others (Hollenbeck, Williams, & Klein, 1989). Goal commitment can also be enhanced by leaders communicating an inspiring vision and being supportive of the subordinate's efforts (Locke & Latham 2006). An alternative to assigning goals is to allow subordinates to participate in setting them, (Locke & Latham (2006). The rationale for letting subordinates participate in goal setting is that this would make goals more important to the person because one would, at least feel a sense of ownership toward the attainment of the goal. When goal difficulty is held constant, performances of those who participate in setting them versus those assigned goals do not differ significantly (Dossett, Latham, & Mitchell, 1979).

Latham, et al. (1988) found that from a motivational perspective, an assigned goal is as effective as one where the individual participates in setting, provided that the purpose or reason for the goal is given. However, if the goal is assigned in an unfriendly way or as an abrupt instruction (e. g.,"Do this ...") without explanation, it leads to performance that is significantly lower than when the subordinate participates in setting the goal (Latham et al. 1988). Subsequently, Locke, Alavi, and Wagner (1997) found that the primary benefit of participation in decision making is that it stimulates information exchange.

According to Locke and Latham (2002) extrinsic rewards such as money (incentive) are one outcome that can be used to increase goal commitment. However, Locke and Latham state that there are important factors that need to be considered. The first is the amount of the incentive; more money has a high probability of gaining more commitment. Second, goals and incentive type interact.

When the goal is very difficult, paying people only if they reach the goal (i. e., a task-and-bonus system) can have negative results on performance. When people see that they are not getting the reward, their personal goals and their self-efficacy drops which leads to a drop in , their performance (Locke & Latham, 2002). This drop does not occur if the goal is moderately difficult or if people are given a difficult goal and are paid for performance (e. g., piece rate) rather than goal attainment (Locke & Latham, 2002). Below is a discussion of the Meta theory proposed by Leonard, Beauvais and Scholl (1999).

2.4.14 Meta-theory of motivation

Leonard, Beauvais and Scholl (1999) proposed an integrated model of motivation after realising that existing traditional models on motivation had failed to explain and predict complex human behaviour, especially in the workplace. The theory incorporates many important concepts previously associated in the literature with the notion of the self-concept. The theory is called the Meta-theory of motivation. Leonard et al. (1999) examined the work of theorists such as Barnard (1938; Etzioni, 1961; de Charmers 1968); Deci, 1975); Hackman & Oldham, 1975); Katz & Kahn, 1978) and initially identified three main sources of motivation. The three sources were labelled (a) intrinsic process motivation, (b) instrumental process motivation and (c) goal internalisation motivation.

By exploring a wide range of literature on self-based theories, Leonard et al. (1999) developed a meta-theory of motivation with five motivational sources. Ryan (2010) argues that although the Meta-theory of motivation put forward by Leonard et al. (1999) does not conform to any one theory it is not "atheoretical." Ryan (2010) states that the purpose of the theory is the integrative understanding of a number of motivational theories, and by moving away from the specifics of a particular theory, the model allows for a better understanding of the concept of motivation as a multi-dimensional and complex phenomenon. The model is useful for investigating the work setting as it recognises a number of motivational sources, which might influence behaviour in the workplace (Ryan, 2010).

According to Leonard et al. (1999) there is a growing realisation that the traditional models of motivation do not explain the diversity of behaviour found in workplace settings. De Charmers (1968) suggests a distinction between intrinsic and extrinsic motivation to characterise the different sources of motivation.

Intrinsically motivated behaviours (those behaviours that occur despite the absence of external controls) are said to represent internal sources whereas behaviours that are induced by external forces are said to represent external sources (de Charmers, 1968).

Deci (1975) explored the effects of extrinsic rewards on intrinsic motivation. Deci (1975) suggests that intrinsically motivated behaviours fall into two categories. The first category includes behaviours that individuals engage in to seek out challenging situations. The second category includes behaviours aimed at overcoming those challenges. Intrinsically motivated behaviour can be seen as a process of seeking and overcoming challenges (Deci, 1975).

Another explanation of intrinsic and extrinsic motivation is given by Katz and Kahn (1978). They argue that the basis of motivation can be categorised in terms of legal compliance, external rewards and internalised motivation. Internalised motivation is further broken down into "self-expression" derived directly from role performance, and internalised "values" resulting when group or organisational goals become incorporated into the value system of the individual (Katz& Kahn, 1978). Etzioni (1975) argues that organisations induce involvement from their members by one of three means; alienative, calculative or moral. According to Etzioni (1975) there are two kinds of moral involvement, pure and social.

Pure moral involvement involves the internalisation of norms, while social involvement results from succumbing to pressures of primary groups and their members (Etzioni, 1975). Leonard et al. (1999) argues that moral involvement is not based on satisfaction of needs and may involve the denial of need satisfaction and the sacrifice of personal pleasure. The consequence of acting in line with one's internalised values is not a sense of pleasure or need fulfilment, but rather a sense of fulfilment attained when the person abides by his or her moral commitments or values (Leonard et al., 1999).

Leonard et al. (1999) argue that three sources of motivation can be identified from the above literature on motivation. The first they call intrinsic process motivation. The second is motivation based on goal internalisation and the third is extrinsic or instrumental motivation. Individuals are motivated by intrinsic process motivation when they perform just because it is "fun" (Leonard et al., 1999). The motivation in this case comes from the work itself. There are no external controls energising behaviour (Deci, 1975).

The other source of motivation identified by Leonard et al. (1999) generated from literature review is goal internalisation, when the individual adopts attitudes and behaviours because their content is congruent with the individual's values (Kelman, 1958). Katz and Kahn (1978) refer to this as motivation based on internalised values. Etzioni (1961) had earlier called it pure moral involvement.

The final source of motivation identified by Leonard et al. (1999) is that induced by external forces. Katz and Kahn (1978) call this motivation legal compliance and external rewards. Etzioni (1975) refers to this as alienative or calculative involvement and de Chamers (1968) suggests that such behaviours have external origin. Leonard et al. (1999) argue that extrinsic or instrumental rewards are a motivating source when individuals believe that the behaviours they engage in will lead to certain outcomes such as pay or promotions. The basic assumption here is that individuals and organisations participate in the exchange relationship (March & Simon, 1958). However, according to Leonard et al. (1999) all the theories mentioned above have not been able to account for the full range of motivated behaviour and these models do not explain changes in behaviour across situations when expectancies and valences remain constant.

To try and address some of the above mentioned difficulties with the motivational models, some researchers have turned to personality theory as a way of explaining behaviour which cannot be explained by environmental or situational factors (Leonard et al., 1999). Psychologists have long argued that individual personalities are significant determinants of behaviour (Leonard et al., 1999). Pevin (1975) argues that there are distinctive differences in ways of behaving, and that individual behaviours are stable over time as well as consistent over time. Those opposed to the personality view however, assert that behaviour is situational and is determined by situational factors and that similarity in behaviours results from similarity of circumstances (Mischel, 1968; Davis, Blake & Pfeffer, 1989).

Most researchers today take the view that behaviour is a function of both environment and personality, that the two variables interact (Mitchell & James, 1989; Pevin, 1989). These researchers suggest that the individual adapts to the environment which is constantly changing.

Leonard et al. (1999) argue that there is a need to develop models that can explain how people are able to shift from situation to situation, often exhibiting different patterns of behaviour while at the same time retaining a recognisable personality structure. A number of self-based theories have been advanced namely self-presentation theory (Beach &Mitchell, 1990; Gergen, 1984), and self-efficacy theory (Bandura. 1986). These theories are premised on the assumption that individuals have a fundamental need to maintain or enhance the self, and individuals are motivated to behave in ways that are consistent with existing self-perceptions (Leonard et al., 1999).

2.4.15 Structure of the self-concept

Leonard et al. (1999) argue that generally, self-concept theories can be placed into two broad categories; undimensional versus dimensional perspectives. The undimensional model assumes that the self-concept reflects an individual's global sense of self. The self-concept is viewed as a stable or generalised sense of self (Leonard et al., 1999). Recent research in social psychology, however, has conceptualised the self-concept as a much more complex phenomenon composed of a set of perceptions, and images, (Leonard et al., 1999). Gecas (1982) asserts that the content of the self-concept consists of perceptions of social and personal identities, traits, and attributes. Bandura's (1986) self-efficacy theory presents a view of the self-measured in terms of competences.

Leonard et al. (1999) present a multi-dimensional perspective of personality, and they present three general sets of attributes that individuals have perceptions of: Traits, Competences and Values. Cattell (1965) defines traits as labels that people use to describe the repeated behavioural patterns of themselves and others. Leonard et al. (1999) assert that individuals hold perceptions of what skills, abilities, talent and knowledge they possess.

2.4.16 The Perceived self

This describes the set of perceptions individuals have about their traits competences and values and these can be described in terms of two dimensions; level and strength (Leonard et al., 1999). Leonard et al. (1999) define the level of self-perception as the degree to which the individual perceives he or she possesses an attribute.

Individuals use two types of evaluative frames of reference; ordinal standard and fixed standard, (Leonard et al., 1999). When using the ordinal standard, the individual is comparing himself or herself with others and when using the fixed standard, he or she rates himself or herself against a goal (Leonard et al., 1999). Leonard et al (1999) explain that the second dimension of the perceived self is the strength of perception and refers to how strongly the individual holds the perception of attribute level.

2.4.17 The Ideal self

Rogers (1959) states that unlike the perceived self which describes the set of perceptions individuals' hold of their actual traits, competences, and values, the ideal self represents the set of traits, competences and values an individual would like to have. The individual wants to believe that he or she actually has a particular trait, competence or value or wants others to believe that he or she has the trait, competence or value.

2.4.18 Social identities

According to Ashforth and Mael (1989) social identification is a process which individuals use to classify themselves and others into different social categories or labels, for example, woman, man, son. The social classification serves the functions of categorising and ordering the social setting and enabling individuals to identify themselves in that social environment (Leonard et al., 1999).

2.4.19. The development of the self-concept

Self-concepts are developed through one's involvement with the environment (Leonard et al., 1999). Processes of attitude formation, attitude change (Adjzen & Fishbein, 1980) and self-attribution (Jones, 1990) all contribute towards the development of a set of self-perceptions. Interacting with one's environment provides feedback about one's traits, competencies, and values together with information indicating the social value of these attitudes (Leonard et al., 1999).

Two forms of information one receives about self from the environment are identified by Leonard et al. (1999). The information comes in the form of task feedback and social feedback. Task feedback comes directly from observing the results of one's efforts on different task activities, and Social feedback is feedback one derives from the behaviour and communication, verbal and nonverbal of others (Leonard et al., 1999).

The relationship between social feedback and the perceived self is based on the concept of attribution, (Jones, 1990). As people try to understand the behaviour of a particular individual, they make certain attributions as to the causes of patterns of behaviour they observe in that particular individual (Jones & Nesbitt, 1971; Kelly, 1971.) According to Leonard et al. (1999), under certain conditions, observers make internal judgements about traits, competences or values of the individual under observation. Leonard et al. (1999) argue that these attributions are communicated with the person in different ways both directly and indirectly, for example, praise or reprimand.

2.4.20. How the self-concept influences behaviour in organisations.

As the self-concept continues to develop, it becomes a source of motivation in that individuals are motivated to maintain and enhance the internalised view of themselves (Leonard et al., 1999). The self-concept is seen by Leonard et al. (1999) as adding on to intrinsic process motivation, extrinsic/instrumental motivation, and goal internalisation as sources of motivation.

According to Leonard et al. (1999) individuals are bombarded with many kinds of information which they often interpret and assign meaning to in terms of their perceived selves. This information may or may not have been intended to reflect on an individual's traits, competencies, or values. However, the meaning individuals attribute to this information is often a function of the strength of their self-perceptions and their need for affirmation of the self (Leonard et al., 1999).

2.4.21 External based self-motivation

In developing their Meta-theory of motivation, Leonard et al. (1999) state that self-concept motivation is externally based when the individual is eternally directed. The ideal self is derived from role expectations of reference groups. In attempting to meet the role expectations of others, the individual behaves in ways that will ensure congruence with social expectations, thereby getting social feedback consistent with self-perceptions (Leonard et al., 1999). The individual initially behaves in ways that satisfy reference groups in order to gain acceptance and later for status (Leonard et al., 1999). These two needs; the need for acceptance and status are similar to McClelland's (1961) need for affiliation and need for power (Leonard et al., 1999).

2.4.22 Internal based self-concept motivation

The individual is in this case, inner-directed. Internal self-concept motivation is apparent when the individual sets standards that become the basis of the ideal self. According to Leonard et al. (1999) the individual uses fixed rather than ordinal standards of self-measurements as he or she attempts to first reinforce perceptions of competency, and later achieve higher levels of competency. This can be compared to McClelland's (1961) high need for achievement (Leonard et al., 1999). What is considered to be important by these individuals is that their efforts are important in achieving outcomes. It is not important that others provide reinforcing feedback in contrast to externally directed individuals (Leonard et al., 1999).

2.4.23. Integration of sources of motivation

Based on the research literature cited, and the theory of the self-concept, Leonard et al. (1999) offer the following propositions;

Table 2-6 Propositions offered by Leonard et al. (1999) below.

Proposition1	There are five basic sources of motivation; intrinsic process, extrinsic/instrumental rewards, external-self, internal self-concept, and goal internalization
Proposition 2	Individuals can be characterized by motivational profiles which reflect the relative strength of each of the five sources.
Proposition 3	For every individual, there is a dominant source of motivation that acts as a focus or lens by which they make decisions and channel behaviour
Proposition 4	When two or more sources of motivation within an individual conflict, the dominant source will prevail.
Proposition 5	Individuals have different motivational source profiles in different situations or with regard to different identities.
Proposition 6	When faced with alternative tasks, individuals dominated by intrinsic process motivation will choose the task which is more enjoyable and the behaviour will be sustained until the task is no longer enjoyable.
Proposition 7	When faced with alternative tasks, individuals dominated by extrinsic/instrumental motivation will engage in the task that provides the greatest potential for extrinsic rewards, and the behaviour will be sustained as long as the likelihood of attaining those rewards remains.
Proposition 8	When faced with alternative tasks, individuals dominated by external self-concept-based motivation will engage in tasks that provide them with affirmative social feedback relative to others, concerning their traits, competences and values in their important identities.
Proposition 9	When faced with alternative tasks, individuals dominated by internal self-concept-based motivation will engage in tasks that provide them with affirmative task feedback about their traits, competences and values in their important identities.
Proposition 10	When faced with alternative tasks, individuals dominated by goal-internalization motivation will choose to engage in tasks that have the greatest potential of achieving the group's or organisation's goal.

Source: Leonard et al. (1999, p. 988).

According to Leonard et al. (1999) it is important to try and capture the various sources of motivation energising individual behaviour.

2.4.24 Cognitive Evaluation Theory

Deci and Ryan (1980) developed a theory on motivation which they termed the Cognitive Evaluation theory (CET).This theory asserts that underlying intrinsic motivation are the psychological needs for autonomy and competence, so the effects of external factors such as rewards depend on how they affect perceived self-determination and perceived competence (Deci 1975). Deci, Koestner and Ryan (1999) state that events that promote need satisfaction tend to increase intrinsic motivation and events that stifle need satisfaction tend to decrease intrinsic motivation. CET proposes that rewards can be interpreted by recipients primarily as controllers of their behaviour or as indicators of their competence (Deci & Ryan, 1980). When rewards are perceived as controllers of behaviour, they are likely to decrease intrinsic motivation and where they are interpreted as indicators of the recipient's good performance; they are likely to increase intrinsic motivation (Deci & Ryan, 1980).

According to Deci and Ryan's (1980) theory, the effects of rewards, the delivery of evaluation, the setting of deadlines and other motivational inputs are a function of how these events influence a person's perceptions of competence and self-determination. Events that decrease perceived self-determination undermine intrinsic motivation whereas those that increase perceived self-determination will enhance intrinsic motivation (Deci & Ryan, 1980).

Events that lead to increased perceived competence will enhance intrinsic motivation, as long as they are accompanied by perceived self-determination, (Ryan, 1982) and those that decrease perceived competence will diminish intrinsic motivation. The theory also examines the effects of rewards from two aspects; the informational aspect, which conveys self-determined competence and thus promotes intrinsic motivation and the controlling aspect, which undermines intrinsic motivation (Ryan, 1982).

Deci and Ryan (1980) argue that verbal rewards contain explicit positive performance feedback and are likely to increase intrinsic motivation. According to the above authors, however, the interpersonal context within which positive feedback is administered can influence whether it will be interpreted as informational or controlling.

According to CET, the informational aspect of verbal rewards is generally thought to enhance intrinsic motivation. However, Deci and Ryan (1980) argue that verbal rewards can also have a significant controlling component where people engage in activities to gain acknowledgement or approval. In this case verbal rewards have the potential to undermine intrinsic motivation (Deci & Ryan 1980). CET is however criticised by some researchers.

Eisenberger, Pierce and Cameroon (1999) argue that reward contingent on reaching a specific criterion of performance increases perceived self-determination. They further argue that the promise or repeated use of reward conveys that:

- The individual giving the reward lacks control over the performance of the potential reward recipient.

- The potential reward recipient has the option of declining the reward and not acting as requested.

Eisenberger et al. (1999) concluded that reward should increase rather than decrease perceived autonomy. They further state that people understand reward's use in everyday life to be utilitarian, involving the reward giver's lack of control over the recipient. The person, group or institution providing the reward usually does so based on the belief that favourable consequences are needed to obtain the co-operation of the potential reward recipient (Eisenrberger et al., 1999).

Harackiewicz and Manderlink (1984) also earlier stated that rewards offered for performing an intrinsically interesting activity can affect later interest in two ways

- They can direct and control behaviour leading individuals to perceive their behaviour as caused by rewards.

- They can also provide performance feedback and can also lead to inferences about competency.

Harackiewicz and Manderlink (1984) further argue that when behaviour is perceived as extrinsically determined, subsequent intrinsic motivation is decreased; when perceptions of competency are developed, intrinsic motivation is enhanced.

These opposing effects on interest are considered to be independent and whichever feature (control or informational) is more salient should determine whether task interest will be undermined or enhanced (Deci, & Ryan, 1980, Ryan, Mims & Koestner, 1983). Bartol and Locke (2000) state that although early research seemed to support Deci and Ryan's (1980) predictions, later research indicated that there were many scenarios that could affect the outcome of the studies on intrinsic motivation. Eisenberger and Cameroon (1996) pointed out that when tangible rewards were dependent on performance, incentives did not undermine intrinsic motivation, and that verbal rewards enhanced intrinsic motivation.

Eisenberger and Cameroon (1996) also attack CET in that the theory suggests that non-performance-based pay would undermine intrinsic motivation by its "controlling" nature whereas incentive pay would not. Moreover, rewards cannot control anything unless the concerned individual values them. Bartol and Locke (2000) argue that the need for autonomy and self-determination which according to Deci and Ryan (1980) are the core of human motivation cannot be so fragile as to be affected by external rewards. The other weakness of the theory noted by Bartol and Locke (2000) is the fact that although Deci and Ryan (1980) acknowledge that rewards can have informational aspects, which would enhance intrinsic motivation as well as controlling aspects, which would undermine intrinsic motivation, Deci and Ryan (1980) do not make it clear how one can know when the informational or controlling aspects are most salient or how the two forces can interact.

Bartol and Locke (2000) further argue that the self-efficacy theory as postulated by Bandura (1986) in his Social Cognitive Theory should play a role in CET theory but is never explicitly acknowledged. Bandura (1976) postulated that if individuals are not convinced that they can perform to the level required to get a reward, the reward will be ineffective in directing their behaviour. Bartol and Locke (2000) also further note that Deci and Ryan's (1980) experiments were carried out in laboratory settings where incentives could be given and withdrawn as the experimenter wishes.

The results may not be generalised to the work setting where one may want to see the effect of incentives in operation and moreover, in organisations, people are not expected to work for free.

2.4.25 Summary

The chapter began by exploring cohort theory, and the different views held by researchers on the construct. Theories of motivation were then outlined, categorised into content theories and process theories. Early theories of motivation, particularly Maslow's (1943) Hierarchy of Needs theory, Adelfer's (1969) ERG theory, Herzberg's (1966) Motivation-Hygiene Theory, and MaClelland's (1953) Achievement theory were discussed followed by a discussion on process theories. The content theories discussed included Expectancy theory by Vroom (1964), Equity theory by Adams (1963) and Jacques (1961), Goal setting theory by Locke and Latham (2006), Meta theory of motivation by Leonard et al (1999) and the Cognitive Evaluation theory by Deci and Ryan (1980). Criticisms of the different theories by researchers were also examined. Different definitions of motivation were also presented in the above section. The next section focuses on work values.

2.5.0 WORK VALUES

Roe and Ester (1999) state that there has been a lot of interest in work values over other areas of life probably because of the key role played by work as a source of income and source of social status. According to Roe and Ester (1999) an assumption has been made by most researchers that work values derive from general values. Kinnane and Gaubinger (1963) found that general values correlate with work values. The argument here is that modern work practices may generate work-related values, which will in turn generalise into the wider society (Kinnane & Gaubinger, 1963). However, before examining work values, it is important to start off by understanding what general values are because it is possible that work values derive from general values (Roe & Ester, 1999).Below are different definitions of general values by different researchers.

Table 2-7.Definitions of Values below

Author	Definition
Rokeach (1972, p.5)	"An enduring belief that a specific mode of conduct or end-state of existence is personally or socially preferable to an opposite or converse mode of conduct or end-state of existence."
Super (1980, p.130)	"An objective, either a psychological state, a relationship, or material condition, that one seeks to attain."
Hofstede (1984, p.18)	"A broad tendency to prefer certain states of affairs over others."
Schwartz (1992, p.2)	"Desirable states, objects, goals, or behaviours, transcending specific situations and applied as normative standards to judge and to choose among alternative modes of behaviour."
Shcwartz and Bilsky (1990)	"Concepts and beliefs about desirable end states or behaviours that transcend specific situations, guide selection or evaluation of behaviour and events, and are ordered by relative importance. Individuals demonstrate these through their speech and actions."

The above definitions treat values as inherent constructs that refer to the way in which people evaluate activities or outcomes (Roe & Ester, 1999). It is widely accepted that values are deeply rooted, abstract motivations, which guide, or explain attitudes, norms, opinions and actions (Rokeach, 1972; Schwartz, 1992). Thus, values can be used for the analysis of attitudes, opinions and actions.

2.5.1 Definitions of work values

Work values have been defined as generalised beliefs about the desirability of various aspects of work (e.g., pay, autonomy, working conditions), and work-related outcomes (e.g., accomplishment, fulfilment, prestige) (Dose, 1997; George & Jones, 1999; Ros, Schwartz & Surkiss, 1999). Work values are proposed to be hierarchically ordered in the individual's mind in terms of their relative importance (Ravlin & Meglino, 1987, Ros et al., 1999). Lyons et al. (2005, p. 63) believe work values to represent cognitive expressions of the different needs or goals that individuals have, which are addressed through one's work, including salary, social status, intellectual stimulation, esteem and self-actualisation needs. Lyons et al. (2005) view work values not as evaluations of specific work aspects or outcomes, but as the underlying criteria used to make such evaluations. "Work values reflect the individual's awareness of the condition he or she seeks from the work situation and regulate his or her actions in pursuit of that condition," (Kalleberg, 1977, p. 129). England (1967) earlier suggested that work values affect how people behave on their jobs.

The concept of work values is defined by Kalleberg (1977) as notions of what individuals hold as desirable with respect to their work activity. According to Brown (2002) work values are the values which individuals believe should be satisfied as a result of their participation in the work role. Some of the work values identified by Brown are financial prosperity, altruism, achievement and responsibility.

Work values are important in guiding behaviour and improving work motivation (Elizur, Borg, Hunt, & Beck, 1991). According to Smola and Sutton (2002) the meaning of work values has changed over time. The Protestant Work Ethic (PWE) arose in the 16th century from the belief that hard work, dedication, and perseverance were pleasing to God (Smola & Sutton, 2002, p. 365). Weber (1930) proposed that the Protestant Work Ethic (PWE) gave the moral justification for the accumulation of wealth.

According to Weber (1930) work is a calling and must be done to the glory of God. Individuals subscribing to the PWE display such characteristics as industriousness, self-discipline, asceticism and individualism (Dose, 1997).Extrinsic work orientations, on the other hand, emphasise work as a means of achieving goals that are external to work, also referred to as "instrumental work orientation "(Dose 1977).

Individuals with this work orientation emphasise the importance of money, job security and other working conditions that reduce stress at work Dose 1977).

The term Protestant Work Ethic has been questioned because similar work values have been identified in cultures where the religion is not Protestant, (Smola & Sutton, 2002). Because values define what people believe to be correct or wrong, this may be extended to what is right or wrong in the workplace setting, (Lyons et al., 2005). Smola and Sutton (2002) however, warn that the workplace today is more complicated. They state that the modern worker's job requires decision making, problem solving, and troubleshooting and managing and as such deciding what is right or wrong in the workplace may not be that simple (Smola & Sutton, 2002).

A wide variety of work value types has been proposed, but there appears to be some consensus on at least two main types: intrinsic work values and extrinsic work values (Lyons et al., 2005). Intrinsic work values relate to the psychological satisfactions of working, such as interesting work, challenge, variety and intellectual stimulation (Elizur, 1984). Extrinsic work values pertain to material aspects of work, such as pay, benefits and job security (Herzberg et al., 1959). Other work values suggested by researchers are the following: social work values, which pertain to relations with co-workers and supervisors (Elizur, 1984); altruistic work values, which involve the desire to help others and make a contribution to society (Dawis & Lofquist, 1984; Pryor, 1987) and prestige values, which relate to status, influence and power (Dawis & Lofquist, 1984; Ros et al., 1999).

Some researchers view values as preferences (Super 1978; Pryor 1979). Super proposes that employees have certain preferences about the type of work they would like to do and the type of work environment they would like to work in. Other researchers, however, view values as a system of work ethics (Jones, 1981; Trevino, 1986). Among individual work values the work ethic, (the belief that work is desirable and rewarding in its own right) has received a lot of research attention (Judge & Bretz, 1992).Values occupy a more central position in the psychological make-up of individuals. They determine attitudes and are more closely linked to motivation (Dose, 1997). Wollack, Goodale, Wijting and Smith (1971) have argued that a deteriorating work ethic has negatively affected the way people feel about their jobs and their commitment to their organisations.

Work value research has been driven by concern for motivation levels of employees and the recognition of the importance of common work values among employees, supervisors and the rest of the organisation (Dose, 1997). According to Dose (1997) although there is a variety of literature on values, there is no agreement on what constitutes a value. Rokeach (1968) links values to beliefs; Super (1972) links them to needs; Schwartz and Bilinsky (1990) link them to goals and Eagly, and Chaiken (1992) linked them to attitudes. The majority of the above theorists though agree that values are standards or criteria guiding action and are long lasting (Dose, 1997).

Meglino, Ravlin and Adkins (1989) argue that values are enduring and relatively resistant to change. Twenge et al. (2010) suggest that values are useful indicators regarding an individual's decisions and actions. When linked to motivation, the work values approach assumes that individuals will be motivated by those activities and consequences that they value (Twenge et al., 2010). There has been considerable disagreement on the distinction between work values and general values but work value definitions have centred on outcomes people desire and want to attain from work (Schwartz & Bilinsky, 1990). Twenge et al. (2010) state that work values shape employees' perceptions of preferences, in the workplace, and have a direct influence on employee attitudes and behaviours. Below is a table depicting dimensions of work values from different researchers.

2.5.2 Dimensions of work values

Table 2-8. Dimensions of values below.

Author	Content
Super (1969)	Intrinsic rewards, altruism, intellectual stimulation, independence, achievement, extrinsic rewards, security, prestige, economic status.
Chapman, Norris and Katz (1977)	Contribution to society, high income, independence, leisure, prestige, security, advancement, challenge, flexible hours, pleasant co- workers.
Kalleberg (1977)	Intrinsic, convenience, financial, relations with co-workers, career opportunities and resource allocation.
Bolton (1980)	Stimulating work, interpersonal satisfaction, economic security, comfortable existence.
Elizur (1984)	Responsibility, job security, recognition for doing a good job, esteem, influence in the organisation, achievement at work, complete and meaningful work, supervision, job status, use of ability and knowledge at work, job interest, independence, pay convenient hours, work conditions, contribution to society.
Ros et al. (1999)	Social, extrinsic, intrinsic, prestige
Schwartz (1994)	Power, achievement, hedonism, stimulation, self-direction, universalism, benevolence, tradition, conformity, security.

Dose (1997, p. 227) defines work values as "evaluative standards relating to work or the work environment by which individuals discern what is 'right' or assess the importance of preferences." According to Dose (1997) some work values may also have an element of social consensus about whether they should be subscribed to, while other values are seen to be equally acceptable according to the choice of the individual concerned.

Values may therefore be held personally or socially and may or may not have a moral element (Dose, 1997). Work values are moral if they follow standards of right and wrong and those that are linked to standards of importance but hold no element of right or wrong may be classified as preferences (Dose, 1997). Many theorists have investigated work values as preferences for the type of work individuals would consider as important in work settings, (Super 1972; Pryor 1979). Zytowski (1970, p. 176) defined work values as "a set of concepts, which mediate between the person's affective orientation and classes of external objects offering similar satisfaction."

Super (1972) argues that values are derived from needs and more general in nature than interests. Super (1972) defines work values as goals that one seeks to attain to satisfy a need. Super (1969) developed a Work Value Inventory (WVI) which categorises values into six groups: material success, altruism, conditions and associates, heuristic (creative) achievement (prestige) and independence (variety),

Lofquist and Davis (1971) conceptualised values as needs, which are categorised according to their underlying commonalities. They developed the Minnesota Importance Questionnaire (MIQ). The factor structure of the MIQ identifies six values; safety, autonomy, comfort, altruism, achievement and aggrandisement.

Pryor (1979) developed the Work Aspect Preference Scale (WAPS) and viewed work values as being concerned with what individuals like or prefer in a job instead of what they think is good or ought to be done. The WAPS distinguishes 12 factors, and these are: security, self-development, altruism, lifestyle, physical activity, detachment, independence, prestige, management, co-workers, creativity and money (Pryor, 1987). Meglino, Ravlin, and Adkins, (1989) having defined work values as preferences for various socially desirable modes of work behaviour developed the Comparative Emphasis Scale which assesses achievement, concern for others, honesty and fairness.

According to de Witte, Halman and Gelissen (2004) intrinsic and extrinsic work orientations can be linked to the broader developments of society (modernisation). Contemporary values stress individuals' self-determination and personal development. Workers in modern societies are therefore expected to display intrinsic work values in contrast to extrinsic work values. In trying to explain the modernisation theory Yankelovich, Zeterberg, Strumpel and Shanks (1985) identified three phases in the modernisation process:

- Traditional agrarian society, dominated by survival and work as a means to survive.
- Industrial society in which material success and the accumulation of wealth are very important. The work orientation is extrinsic.
- Welfare states in which work is no longer essential to provide security. Basic human needs are guaranteed by social security systems.

- The focus in such societies is on non-material needs such as personal development and self-fulfilment (Yankelovich et al., 1985).

From the above three phases, one can conclude that an increase in prosperity goes hand in hand with an increase in intrinsic work values. According to the modernisation theory, an economic recession and rising levels of unemployment are likely to produce a return to material values. In developing a structure of work values Elizur, Borg, Hunt and Beck (1991) distinguished two basic facets of work values namely; modality of outcome and system performance contingency.

2.5.3 Modality of outcome

According to Elizur et al. (1991) work outcomes can be of material nature such as pay, hours of work and working conditions. This class of outcomes is classified as instrumental (extrinsic) in the sense that they are concrete and material. Other outcomes identified by Elizur et al., which are not of material nature are relations with people, colleagues; supervisors (interpersonal relations) are thus affective rather than material. Cognitive outcomes are those that deal with items such as interest, achievement, responsibility and independence (Elizur et al., 1991).

2.5.4 System performance contingency

The systems performance value structure results from management's recognition that individuals need to be motivated to join organisations and remain with the organisation (Elizur et al., 1991). Various incentives are provided, which are given, regardless of performance. These include working conditions, services such as free transportation, subsidised meals and are classified as resources (Elizur et al., 1991). There are, however, some outcomes, which are provided contingent upon performance and in exchange for it such as pay, recognition, and achievement. These are termed rewards (Elizur et al., 1991). Based on the above structure, Elizur et al. (1991, p. 23) define work values as "The extent to which subject X assesses the importance of having (a) instrumental (b) affective (c) cognitive outcome provided (a) reward (b) resource is of very high to very low importance to him\her for a sense of well-being at work."

Twenge et al. (2010) argue that for managers to identify and respond to employees' individual work values, they must understand the types of values present within the work force and how these are perceived by the workers.

This knowledge will enable managers to anticipate how employees are likely to react to different work assignments and rewards as well as appreciate how work values influence decision making (Twenge et al., 2010)

2.6.0 TYPES OF WORK VALUES INVESTIGATED IN THE STUDY

2.6.1 Intrinsic work values

Campbell and Pritchard (1976) carried out a meta-analysis on studies that have been carried out on work values and concluded that a hierarchical structure emerges, clustered around two general factors- intrinsic versus extrinsic. Lyons et al. (2006) also identified two fundamental types of work values, intrinsic work values, which pertain to the inherent psychological satisfaction of working, such as interesting work, challenge, variety, and intellectual stimulation and extrinsic work values such as job security and pay. Lyons et al. (2006) also examined extrinsic work values, which relate to the material aspects of work such as pay, benefits and job security. Intrinsic work values such as an interesting job mean that those individuals who value such values work for work's own sake rather than materialistic rewards (Lyons et al. 2006). In defining intrinsic motivation, Deci, Koestner, and Ryan, (2001) state that intrinsic work values relate to the process of work and the intangible rewards that an individual gets from work such as the learning potential, and the chance to be creative.

2.6.2 Extrinsic work values

According to Twenge et al. (2010) the proposition that extrinsic rewards such as pay and other material rewards as well as prestige is the main factors that influence people to work is very old. Kalleberg (1977) earlier pointed to a convenience dimension which refers to the "soft" aspects of the job, for example, convenient travel to and from work. Kalleberg (1977) states that intrinsic dimensions refer to those characteristics associated with the task itself, for example, that the task is interesting or allows for the individual to develop.

Modern organisational theory, however, places lesser emphasis on extrinsic rewards as primary motivators of human behaviour (Deci et al., 2001).

Extrinsic work values are defined as consequences of work, which are tangible and external to the employee such as salary, advancement and opportunities (Twenge et al., 2010). The distinction between intrinsic and extrinsic work values has, however, been questioned by researchers such as Dyer and Parker (1975) who state that the intrinsic or extrinsic distinction is highly ambiguous. Billings and Cornelius (1980) argue that if intrinsic and extrinsic mean different things to different researchers, then it may be a poor basis for understanding work outcomes.

2.6.3 Altruistic values

Another dimension of work values that has been researched on is altruistic values. According to Twenge et al. (2010) altruistic values include the motivation to help others and societies through work. Altruistic values relate to the desire to help others and to make a contribution to society (Davis & Lofquist, 1984).

2.6.4 Social values

The need to be connected to others is closely connected to the intrinsic value and explains social work values, which according to Elizur (1984) pertain to the employees' relations with other workers and supervisor.

2.6.5 Prestige work values

The final set of work values under consideration in the study are prestige work values, which relate to status, influence and power an employee has over other employees (Super, 1969).

2.6.6 Summary

The above section traced the origin of work values from general values and made a distinction between the two. Five dimensions of work values were identified based on literature review, and each dimension was defined.

It is the aim of the study to link these five dimensions of work values with generational differences in the workplace. The next section examines organisational commitment with the aim of linking all the described constructs to cohort membership.

2.7.0 ORGANISATIONAL COMMITMENT

Table 2-9. Definitions of organisational commitment below.

Author	Definition
Porter, Steers, Mowday, and Boulian, (1974, p. 222)	The relative strength of an individual's identification with and involvement in a particular organisation.
Wiener(1982, p. 421)	…the totality of normative pressures to act in a way which meets organisational goals and interests.
O'Reilly and Chatman, (1986, p. 493)	…the psychological attachment felt by the person for the organisation it will reflect the degree to which the individual internalises or adopts characteristics or perspectives of the organisation.
Allen and Mayer (1990, p. 14)	…a psychological state that binds the individual to the organisation (i.e., makes turnover less likely).
Buchanan (1974, p. 533)	Commitment is viewed as a partisan, affective attachment to the goals of an organisation, to one's role in relation to the goals and values and to the organisation for its own sake, apart from its purely instrumental nature.
Sheldon (1971, p. 143)	Commitment is a positive evaluation of the organisation and the intention to work towards its goals.
Kantor (1968, p. 500)	The willingness of social actors to give energy and loyalty to the organisation.

Steers, (1977) argues that the concept of employee commitment has received considerable attention from both managers and organisational analysts because recent findings indicate that commitment is a better predictor of turnover intentions. Scholl (1981) further states that it is rare to find any comprehensive work on organisations that does not, in one way or another, refer to the construct of employee commitment. As managers seek ways to increase employee retention and performance, the study of employee commitment has thus received a lot of attention.

According to Scholl (1981) the main reason why commitment has been one of the most popular research subjects in industrial psychology, and organisational behaviour is its assumed relationship with work performance. However, researchers have not been able to agree that commitment and performance go hand in hand (Steers 1977). "Although higher levels of commitment may relate to improved job performance in some situations, some findings suggest that commitment has very little direct influence on performance in most instances"(Mathieu & Zajac 1990, p. 184).

Findings however, by Porter, Mowday and Durbin (1974) indicate that highly committed employees are more likely to perform better than less committed employees. Literature on organisational commitment suggests no consensus on the conceptualisation of the construct of commitment. The literature is divided into two different schools (Scholl, 1981). One school is generally termed the rational school, or attitudinal school led by Porter et al. (1974). This school of thought views commitment as an attitude or set of behavioural intentions, for example, a desire to remain with the organisation, or an intention to exert higher levels of effort on behalf of the organisation (Scholl, 1981).According to Porter et al. (1974) attitudinal commitment exists when the identity of the person is linked to the organisation or when the goals of the organisation and those of the individual increasingly become congruent. Attitudinal commitment, therefore, represents a state of affairs in which an individual identifies with the organisation he or she works for and its goals and thus wishes to maintain membership in order to meet the goals of the organisation (Porter et al., 1974). Such commitment is linked to the exchange relationship whereby the individual attaches himself or herself to the organisation in return for certain rewards or payments from the organisation (March & Simon, 1958). The attitudinal school of thought therefore views commitment as an attitude. The other school known as the irrational or psychological school views commitment as a force that ties the individual to a particular organisation (Scholl, 1981). This school of thought proposes that investments explain membership (Scholl, 1981).

Commitment linked to behaviours suggests that such behaviours represent sunk costs in the organisation and the individual foregoes alternative courses of action and chooses to link him or herself to the organisation because it would be costly to act otherwise (Scholl, 1981). Mayer and Allen (1984) conceptualised commitment as made up of three psychological states, each of which has an influence on whether an individual remains with the organisation or not.

These are: emotional attachment to the organisation, (affective commitment), recognition of the costs associated with leaving the organisation (continuance commitment), and perceived obligation to remain with the organisation (normative commitment).

Commitment, therefore, represents more than passive loyalty to the organisation, with the individuals actively voluntarily giving up something of themselves in order to contribute to the success of the organisation (Mowday, Steers & Porter, 1979). Thus literature identifies three types of commitment mentioned above.

The approach to commitment used in this study is based on a three-component model which takes into account the major conceptualisations described in extant literature (Allen & Meyer, 1990; Meyer & Allen, 1991). Allen and Mayer (1990) argue that employees remain with an organisation because of their: (1) desire to remain (affective commitment), (2) recognition that the costs associated with leaving would be high (continuance commitment), and or (3) feelings of obligation to remain (normative commitment).

According to Allen and Mayer (1993), each component develops independently and results in different work behaviour. Affective commitment is expected to develop based on work experiences that increase the employees' feelings of challenge and "comfort" in the organisation (Allen & Mayer, 1993). Continuance commitment, on the other hand, develops as a function of the number and magnitude of investments employees make in their organisations (e.g., pension contributions and social investments on friends and colleagues) and the degree to which they feel they have employment alternatives (Allen & Mayer, 1993). Finally, it is argued that the antecedents of normative commitment include early socialisation experiences (e.g., parental emphasis on loyalty to an employer) as well as those that occur after organisational entry (Allen & Mayer, 1993).

According to MacDonald and Makin (1999) affective commitment is concerned with the extent to which the individual identifies with the organisation. O'Driscoll, and Randall (1999) argue that affective commitment reflects an attitude which centres on emotional identification with the values and goals of the organisation whereas continuance commitment is concerned with the individual's need to continue working for the organisation.

Allen and Mayer (1993) state that continuance commitment is based either on the material benefits to be gained from remaining with that particular company or the anticipated costs and disadvantages of leaving the organisation. Sheldon (1971) states that continuance commitment is linked to investments which individuals may have made to the organisation and this leads to higher commitment to the organisation.

Investments refer to participation in an organisation which prevents one from participating in other organisations and this may occur with or without the individual being aware of it (Sheldon, 1971). One type of investment is social investment which refers to interaction and identification with other members of the organisation leading to an individual believing that leaving an organisation would mean leaving these important people (Sheldon, 1971).Becker (1960)suggests that an individual who has more at stake in an organisation or, similarly, one who has accrued more over the years and thus could lose by leaving the employing organisation, would have more personal commitment to the organisation. Normative commitment is commitment that is influenced by societies' norms about the extent to which people ought to be committed to their organisations (MacDonald &Makin, 1999).

Steers (1977) argues that although many studies have been conducted on organisational commitment, several problems still remain. Because few studies have taken a systematic approach to the study of commitment, there is little information to guide researchers in model building (Steers, 1977). The other major problem identified by Steers is the fact that most studies view commitment as a dependant variable and little is known about the behavioural outcomes of the construct.

Berker and Carper (1956) argue that commitment to an organisation is related to three types of experiences; investments which is the time spent in a graduate programme, involvement with peers and teachers which reinforce the value of the profession and development of technical skills and interest. Commitment has also been found to be related to work experience (Buchanan, 1974). Finally Steers (1977) hypothesised that commitment is related to performance under the assumption that committed employees are likely to expend greater effort on the job. In an attempt to distinguish between commitment as an attitude or behaviour Mowday, Steers and Porter (1982) state that attitudinal commitment reflects the individual's identification with the organisational goals and his or her willingness to work towards them.

There is a cyclical relationship between attitudinal commitment and behavioural commitment, with commitment attitudes leading to commitment behaviours which in turn re-enforces commitment attitudes (Mowday et al., 1982).

2.7.1 Dimension of organisational commitment

Table 2-10.Dimensions of organisational commitment below**.**

Author(s)	Dimension
Angle and Perry (1981, p.4) Value commitment Commitment to stay	 Commitment to support the goals of the organisation Commitment to retain their organisational membership
O'Reilly and Chatman (1986,p. 493) Compliance Identification Internalisation	 Instrumental involvement for specific extrinsic rewards attachment based on a desire for affiliation with the organisation involvement predicted on congruence between individual and organisational values,
Penley and Gauld (1988,p. 46) Moral Calculative Alienative	Acceptance of and identification with organisational goals A commitment to an organisation which is based on the employee's receiving inducements to match contributions Organisational attachment which results when an employee no longer perceives that there are rewards commensurate with investments; yet remains due to environmental pressures.
Mayer and Allen (1991, p. 67) Affective Continuance Normative	The employee's emotional attachment to, identification with, and involvement in the organisation An awareness of the costs associated with leaving the organisation A feeling of obligation to continue employment
Mayer and Schooman (1992, p. 673) Value Continuance	 A belief in and acceptance of organisational goals and values and a willingness to exert considerable effort on behalf of the organisation The desire to remain a member of the organisation
Jaros, Jermier, Koehla, & Sincich(1993, p.54) Affective Continuance Moral	The degree to which an individual is psychologically attached to an employing organisation through feelings such as loyalty, affection, warmth, belongingness, fondness, pleasure and so on. The degree to which an individual experiences a sense of being locked in place because of high costs of leaving. The degree to which an individual is psychologically attached to an employing organisation through internalisation of its goals, values and missions.

Source: Mayer and Herscovitch (2011)

Although the above definitions and dimensions vary considerably, many of them focus on commitment-related behaviours or attitudes. Mowday et al. (1979) argue that when one states that someone is bound by his actions, these behaviours are clear signs of commitment, and they represent sunken costs in the organisation where the individual chooses not to take alternative courses of action in order to remain with the organisation. The attitude of the individual is seen when the identity of the individual is linked to the organisation or when the goals of the organisation and those of the individual become inseparable (Mowday et al., 1979).

Meyer and Herescovitch (2001) state that there is a consensus on the above definitions in that organisational commitment is a mind-set (a frame of mind or psychological state that compels an individual toward a course of action) but little agreement on the nature of the mind-set. Allen and Meyer (1990) identified three mind sets which they label, affective, continuance and normative. Meyer and Herescovitch (2001) argue that the main basis for affective commitment is personal involvement. They argue that normative commitment develops as a function of organisational socialisation and the receipt of benefits that make one feel that they owe the organisation something. Continuance commitment develops as a result of accumulated investments that would be lost if the individual left the organisation or as a result of lack of alternative jobs (Powel & Mayer, 2004).

Angel and Parry (1981) proposed a distinction between value commitment (support for organisational goals) and commitment to stay (willingness to remain). In extending this proposal Mayer and Schoorman (1992) suggested that commitment has two dimensions; continuance commitment (desire to remain) and value commitment (willingness to exert effort). These dimensions differ from Allen and Mayer's (1991), affective; continuance and normative commitment in terms of the mind-set that binds the individual to the organisation (Meyer & Herescovitch, 2001).However the underlying behavioural consequence of all the mind-sets associated with organisational commitment is the same: continued employment.

Mayer and Herescovitch (2001) argue that the above models have both differences and similarities. The differences lie in the mind-set of the individual (for example, emotional attachment, sense of being locked in, belief in and acceptance of goals) which are presumed to characterise commitment, (Mayer & Herescovitch, 2001).

The similarity is that in most of the models, there is a dimension reflecting an affective (emotional) bond with the organisation, (Meyer & Herescovitch, 2001).

The dimension may be called affective commitment, (Allen& Mayer, 1991), value commitment, (Mayer & Schoorman, 1992), moral commitment, (Jaros et al., 1993), and normative commitment, (Caldwell, Chatman& O'Reilly, 1990). Although the basis for the development of the affective bond may differ across the different models, they all appear to agree on a mind-set characterised by a desire to remain with the employing organisation (Meyer & Herescovitch, 2001). The models are also in agreement that individuals may be committed to a course of action in fear of the cost associated with failure to do so and this has been referred to as continuance commitment, (Mayer & Allen, 1984: Jaros et al., 1993).

Reichers (1985) however, argues for the case of organisational commitments rather than organisational commitment. According to this view "commitment is a process of identification with the goals of an organisation's multiple constituencies." These constituencies may include top management, customers, union and or the public at large (Reichers, 1985). The argument presented by Reichers is that organisations may be viewed as coalitions and constituencies, each of which may hold unique sets of goals and values, which may be in conflict with one another. Reichers (1985) argues that a major problem with commitment literature is that it has tended to treat the organisation as simple, suggesting that an organisation is made up of people with shared interest, which is a unitarist approach to the definition of an organisation. The organisation has, however, been viewed as a coalition of interest groups (Cyert & March, 1963) which is a pluralist perspective.

2.7.2 The development of organisational commitment

The development of organisational commitment has generated a lot of attention from researchers (Mowday et al., 1982; Reichers, 1985). Meyer and Herescovitch (2001) argue that when examining the factors which are involved in the development of organisational commitment, it is important to distinguish between the different mind sets that contribute towards the development of commitment. It must thus be possible to distinguish among antecedents of effective, continuance, and normative commitment (Meyer & Herescovitch, 2001).

According to Meyer and Herescovitch (2001) the mind-set that characterises affective commitment is desire and individuals with strong affective commitment want to pursue a particular course of action.

Continuance commitment, on the other hand, is characterised by the notion that it would be costly to deviate from a course of action as a result of investments made by the individual which would be lost if the individual was to discontinue the course of action (Jaros et al., 1993; Mayer & Allen 1991). Lack of alternatives has also been included as a basis for the development of continuance commitment (Mayer & Allen, 1991). Normative commitment is characterised by a mind-set that one has an obligation to continue with a course of action (Meyer & Herescovitch, 2001). Mayer and Allen (1991) proposed that individuals displaying normative commitment would have internalised sets of norms concerning appropriate conduct and are the recipients of benefits and therefore, experience a need to reciprocate or this might be a reflection of the employee's recognition of his or her obligations within the psychological contract(Meyer & Herescovitch, 2001). The psychological contract is defined by Rousseau (1989) as a contract which emerges when one party believes a promise of future returns has been made and a contribution has been given and thus an obligation has been created to provide future benefits.

2.7.3 Outcomes of Organisational Commitment

The most common finding in commitment research is an inverse relationship between commitment and turnover (Angle & Perry, 1981; Mowday et al., 1982). Another common finding is the lack of a relationship between commitment and performance (Steers, 1977; Mowday et al., 1982; Morrow, 1993). This has been explained to be related to the difficult nature of performance measurement (Angle & Parry, 1981). Angle and Parry (1981) point out that since performance is setting specific, multidimensional measures of performance are required.

2.74 Summary

Organisational commitment was initially defined and two schools of thought emerged, one that viewed commitment as an attitude and another that viewed commitment as behaviour. Three dimensions common to most definitions were identified and defined. These were identified to be "affective commitment", "continuance commitment" and "normative commitment." The possible outcomes of commitment were also briefly discussed. The following section is a discussion of job satisfaction.

2.8.0 JOB SATSFACTION

2.8.1. Introduction

The construct of job satisfaction has generated a lot of debate since the 1930s, but no agreement on its causes has been reached (Locke, 1969). Locke further argues that the lack of agreement on the subject results from lack of agreement on whether the causes lie in the job itself (intrinsic view) or lie in the worker's mind (subject view) or whether there is interplay between the worker and his environment.

Job satisfaction is defined as "the pleasurable emotional state resulting from the appraisal of one's job as facilitating the achievement of one's job values." Job dissatisfaction, on the other hand, is "the unpleasurable emotional state, resulting from the appraisal of one's job as frustrating or blocking the attainment of one's job values" (Locke, 1969, p. 316).Spector (1997) defines job satisfaction as simply how people feel about their jobs and different aspects of their jobs. It is the extent to which people like (satisfaction) or dislike (dissatisfaction) their jobs.

Job satisfaction has been conceptualised as the degree of positive emotions an employee has toward a work role (Locke, 1976; Kalleberg, 1977.). Porter (1962) earlier viewed job satisfaction as the result of the degree to which job needs are perceived as being fulfilled on the job. Job satisfaction refers to an overall affective orientation on the part of individuals towards work roles which they are presently occupying (Kalleberg, 1977).

Tett and Mayer (1983) define job satisfaction as one's affective attachment to the job viewed either in its entirety (global satisfaction) or certain aspects of the job. Locke (1976) refers to affective attachment as the sum of the evaluations of the different elements of the job, or particular aspects of the job. Job satisfaction indicates an individual's general attitude towards the job (Brooke, Russell & Price, 1988).

2.8.2 Predictors of job satisfaction

Job tasks performed by the worker have been studied as predictors of job satisfaction (Glick, Jenkins & Gupta, 1986). According to Glisson and Durick (1988) skill variety and role ambiguity are the strongest predictors of job satisfaction, meaning that where workers have no confusion regarding their responsibilities, and are also allowed to use an assortment of their abilities, they will be more satisfied with their jobs. Other predictors of job satisfaction originate from the organisation in which the worker performs the work (Glisson & Durick, 1988). Leadership has been identified as one of the predictors stemming from the organisation itself (Haynes 1979) supervision (Brass, 1981; Lopez, 1982; Bateman & Organ, 1983).

The final category of predictors of job satisfaction relates to the characteristics of the worker. Staw and Ross (1985) carried out a study and found out that job satisfaction is a function of an individual's disposition. Dewar and Werbel (1979) propose job satisfaction to be related to age and Mac Neely (1984) reported gender predicting job satisfaction. The present study attempts to find out whether there is a relationship between job satisfaction and cohort membership.

2.9.0 RELATIONSHIPS BETWEEN THE CONSTRUCTS

2.9.1 Generational Differences and Work values

Cherington, England and Condie (1979) conducted a study on age and work values and the results indicated that older workers placed greater importance on the moral importance of work and pride in craftsmanship. Younger workers placed more importance on money, importance of friends over work and an acceptability of welfare as an alternative to work. Twenge et al. (2010) study produced somewhat different results which found that leisure values increased steadily over the generations, and work centrality declined. Extrinsic work values, however, were found to be higher for generation X and Y than Baby Boomers, but Baby Boomers rated social values higher than generation X and Y.

Another study carried out by Smola and Sutton (2002) on generational differences, and work values found significant differences between Baby Boomers and Generation X on the desire to be promoted. Younger workers reported a stronger desire to be promoted more quickly than older workers. However, the study found no significant differences between Baby Boomer generation and generation X on pride in craftsmanship, which is in direct contrast with the earlier study carried out by Cherington, et al. (1980).

Lyons et al. (2005) carried out a study on generational differences and work values and found that generation Y placed greater emphasis on social work values than the older generations. Generation Y also placed greater importance on prestige values relative to other generations. Generation X, however, rated the importance of intrinsic work values higher than both Baby Boomers and generation Y. Extrinsic work values such as pay and benefits were found to be important to all employees of all generations. Some of the results were confirmed by a study carried out by Cenamo and Gardner (2007) which found that the younger generations, X and Y rated status and freedom values higher than Baby Boomers but found no differences between the groups on intrinsic and social values.

Gursory et al. (2008) used focus group discussions to examine generational differences in work values. Their study found significant differences in world views, attitudes towards authority and perspectives on work. Baby Boomers were found to respect authority and hierarchy while Generation X rebel against authority. The findings also suggest that Baby Boomers live to work, and Generation X works to live. Baby Boomers were also found to be more willing to wait for their turn for pay and promotion but Generation X expects immediate recognition. Generation X was also found to want a life outside work which ties in well with their belief that they work to live. Generation Y was found to trust centralised authority and also enjoy team work.

Another study on generational differences and work values was carried out by Chen and Chi (2007) on hospitality staff and found that Generation X and Y ranked supervisory relationships higher than Baby Boomers. Generation X ranked security and independence higher than Baby Boomers and generation Y. Generation Y ranked economic returns higher than the other generations.

2.9.2 Cohort membership and job satisfaction

Kalleberg and Loscoco (1983) used data from the 1972 Quarterly of Employment Survey and found that age is positively related to job satisfaction. The most widely offered explanation regarding age differences and job satisfaction generally focuses on characteristics of the job (Kalleberg & Loscoco, 1983). One of the reasons given is that older workers have better or more rewarding jobs (Qinn, Graham & McCullough, 1974; Wright & Hamilton, 1978). Van Maanen and Katz (1976) earlier proposed that age may only reflect career phases, that is older workers have been promoted to senior positions over time. Thus, they have better jobs than younger workers.

Cennamo and Gardner (2007) investigated differences across the three generations in work values, job satisfaction, affective commitment and intentions to leave. The study found that the younger generations, Generation X and Y, placed more importance on status and freedom work values than Baby Boomers. Baby Boomers and Generation X showed lower levels of freedom values than generation Y. However, no significant differences were found on intrinsic, altruistic and social values.

2.9.3 Cohort membership and motivation

Barbutto and Miller (2008) examined intergenerational differences in work motivation and found significant results that input motivational patterns. The study found significant differences in instrumental motivation with Generation X identifying instrumental motivation to be higher than the Baby Boomer cohort. Baby Boomers, however, reported higher goal internalisation motivation than Generation X.

Wong et al., (2008) carried out a study on generational differences in personality and motivation and found that there were significant generational differences on three of the six hypothesised motivational drivers. Employees from different generations (Baby Boomers, Generation, X and Y) were found to be motivated to a different degree by power, affiliation and progression. Generation X and Y were found to be more motivated by progression than Baby Boomers.

Generation Y was found to be more motivated by affiliation than Baby Boomers and less motivated by power than generation X who was in turn less motivated than Baby Boomers. However, there were no significant differences on Immersion, Security and Personal growth.

2.9.4 Work values and organisational commitment

Elizur and Koslowsky (2000) examined the relationship between work values and organisational commitment and found that work values were related to organisational commitment. Kidron's (1978) study on work values and organisational commitment found a significant relationship between moral commitment and Protestant Ethics. Respondents with high Protestant work ethics tended to express high moral commitment while those with a low Protestant work ethics experienced low moral commitment. Finegan (2000) examined the impact of person and organisational values and found that commitment was predicted by the employees' perception of organisational values and that affective, normative and continuance commitments were each predicted by different types of values. Mayer, Irving and Allen (1998) examined the effects of work values and early work experiences on organisational commitment and found that work values, and experience did interact in the prediction of organisational commitment.

2.9.5 Commitment and motivation

A number of studies on organisational commitment are linked with the exchange relationship (Scholl 1981). The main argument of the exchange models is that individuals work for organisations in exchange for rewards. Membership is maintained as long as rewards and contributions balance (Scholl, 1981).According to Mayer, Becker and Vandenberghe (2004) managers and organisational scientists have been interested in employee commitment and motivation for a long time. There are beliefs and evidence that there are benefits to having motivated and committed employees (Locke & Latham, 1990; Mayer & Allen, 1993). Mayer, et al. (2004) lament the fact that literature on the two constructs has evolved independently of each other and that few attempts have been made to integrate the two literatures in order to demonstrate whether the two concepts are similar, different or related. Indeed, motivation and commitment may combine to influence behaviour.

According to Moon (2000) expectancy, theory assumes a positive relationship between the level of intrinsic and extrinsic expectancy and organisational commitment. Individuals with a higher level of intrinsic motivation (a sense of achievement or job importance) are likely to display higher levels of organisational commitment. Scholl (1981, p. 596) proposes that "the propensity to remain in a particular organisation increases as the individual's perceived probability of prolonged equitable rewards associated with continued membership increases."

2.9.6 Organisational commitment and job satisfaction.

Research suggests a positive correlation between job satisfaction and organisational commitment (Mathieu &Zajac, 1990). According to Williams and Hazer (1986) there is a direct link between job satisfaction and organisational commitment, whereby job satisfaction is an antecedent of organisational commitment. The reasoning here is that an employee's orientation toward a specific job precedes his or her orientation toward the entire organisation (Williams & Hazer, 1986). Mowday et al. (1979) argues that commitment differs from job satisfaction in that commitment is more global than job satisfaction, and reflects a general affective response to the organisation as a whole. Job satisfaction on the other hand, is a reflection of an individual's response to his or her job or some aspect of the job.

Job satisfaction and organisational commitment have been shown to be positively related to performance (Benkhoff, 1997) and negatively related to turnover (Mathieu & Zajac, 1990) and turnover intent (Glison & Durick, 1998). A number of researchers agree that there is a positive relationship between satisfaction and commitment (Mowday et al., 1982) and that this relationship has an influence on performance and turnover intent (Mathieu & Zajac, 1990; Benkhoff, 1997).

Steers (1977) argues that although job satisfaction has been shown to be related to organisational commitment its treatment as an independent construct should be emphasised. A number of factors distinguish job satisfaction from organisational commitment. Mowday et al. (1979, p.226) argue that organisational commitment is "more global, reflecting a general affective response to the organisation as a whole" while job satisfaction "reflects one's response either to one's job or to certain aspects of one's job."

Thus organisational commitment focuses on attachment to the employing organisation as a whole, including the organisation's goals and values, while job satisfaction focuses on the specific task environment where an employee performs his or her duties (Mowday et al., 1979).

Mowday et al. (1979) propose that organisational commitment is less influenced by daily events than job satisfaction. It develops more slowly but over time, and is therefore seen to be a more complex and enduring construct than job satisfaction (Mowday et al., 1979).

Furthermore, job satisfaction and organisational commitment do not necessarily occur together: it is possible that an employee may exhibit high levels of job satisfaction without having a sense of attachment to, or feeling an obligation to remain in the organisation (Mowday et al., 1979). This is more likely to be the case with professionals who may be more committed to their professions than to their organisations. Similarly, a highly committed employee may dislike the job he or she is doing (exhibiting low levels of job satisfaction) (McPhee & Townsend, 1992).

Although there is some general agreement in research on the existence of a positive association between commitment and job satisfaction, the causal ordering between the two variables remains both elusive (Steers, 1977).A commitment-to-satisfaction model suggests that commitment contributes to an overall positive attitude toward the job (Tett & Meyer, 1983; Vandenberg & Lance, 1992). Although there is lack of agreement regarding the relationship between job satisfaction and organisational commitment, several researchers have made the case that job satisfaction is a predictor of organisational commitment (Rose, 1994).

Some researchers, however, have argued that organisational commitment may cause, rather than be the result of job satisfaction (Salancik & Pfeffer, 1978; Bateman & Strasser, 1984). Bateman and Strasser (1984, p.97) report that "commitment to a course of action may determine subsequent attitudes" and that "commitment initiates a rationalising process through which individuals make sense' of their current situation by developing attitudes that are consistent with their commitment." Bateman and Strasser (1984)'s longitudinal research supports this claim. Their findings "suggest that commitment may be a construct that is neither simultaneous with, nor a consequence of, job satisfaction.

Rather, organisational commitment appears to be one of many causes of satisfaction" (Bateman & Strasser, 1984, p.109). Notwithstanding that a number of researchers have adopted job satisfaction as an antecedent of organisational commitment (Price & Mueller, 1986; Williams & Hazer, 1986), there are some who have questioned this assumption (Vandenberg & Lance, 1992).

Porter et al. (1974) maintain that commitment requires employees to think more globally, and it takes longer to develop and is not sensitive to short-term variations in, aspects such as work conditions. Job satisfaction, on the other hand, represents the employee's more current reactions to the specific work tasks and employment conditions. Porter et al. (1974) conclude that commitment takes longer and is more durable, than job satisfaction. In support of Porter et al. (1974) Mowday et al. (1982) argue that although day-to-day events in the work place may affect an employee's level of job satisfaction, such temporary events should not cause an employee to re-evaluate seriously his or her attachment to the overall organisation.

2.10.0 COVARIATES

In order to accurately determine the association between cohort membership and sources of motivation, work values, organisational commitment and job satisfaction other variables that may have an influence on the dependent variables were also considered. These are gender, education, tenure, race, and health.

Age has been shown to be positively related to commitment (Lee, 1971; Sheldon, 1971; Herebiniak & Alutto 1972; Angle & Parry, 1981). However, it has been argued that the link between age and tenure causes this relationship (Buchanan, 1974). In line with the proposed relationship between age and commitment, length of service or seniority should be positively related to the accumulation of investments in the organisation (Herebiniak & Alutto, 1972). Length of service suggests the accumulation of organisational resources and the development of an organisational career (Herebiniak & Alutto, 1972). Generally, length of service binds one to the organisation, for example, in pension or profit-sharing plans (Sheldon, 1971). Grusky (1966) found that organisational commitment increased with length of service.

Herebiniak and Alutto (1972) suggest that time invested becomes a valued resource in itself, and the privileges associated with length of service make it easier to get additional organisational rewards. Employee age and tenure were earlier found by Herzberg et al., (1957) to bear a U shaped relationship with job satisfaction.

Education is another personal characteristic that has been linked with constructs such as motivation, commitment and job satisfaction. Mixed results have been reported regarding education as an antecedent of commitment. Koch and Steers (1978) reported a positive relationship between education and commitment.

Angle and Parry (1981) argue that decreasing levels of education may limit the individual's options regarding finding another job. Mowday et al. (1982) pointed out that highly educated individuals may also have higher expectations than the organisation can meet. This may lead to lower commitment. Professionals are likely to have prior commitment to their profession, which is more enduring than their commitment to their organisation (Mowday et al., 1982). The final characteristic considered is gender.

The relationship between gender and commitment has also been researched upon. Some researchers have argued that no relationship between gender and commitment will be found when age and education, are statistically controlled (Brief & Aldag, 1977). A number of researchers, however, have reported that females are more committed to organisations than males (Hrebiniak & Alutto, 1972; Angle & Parry, 1981; Mowday et al., 1982).

With regards to race, Shapiro (1977) examined differences between black and white workers in their evaluation of intrinsic and extrinsic work aspects and found that black workers were likely to prefer extrinsic rewards whereas white workers were more ,likely to prefer intrinsic rewards. Martin and Tuch (1993) confirmed the findings of Shapiro (1977). As a result of the above findings the five variables mentioned above were used as control measures. Below is the summary of the chapter on literature review.

2.10.1 Summary of chapter

The literature that relates to generational differences was first reviewed. After this, the literature that relates to motivation theory was reviewed. Content and process theories of motivation were discussed.

Five sources of motivation to be used in the study were identified and discussed based on the work of Leonard et al., (1999). These are: intrinsic motivation, extrinsic motivation, internal self-motivation, external self-motivation and goal internalisation. Literature that relates to work values was then reviewed.

Five dimensions of work values to be used in the study were identified. These are: intrinsic work values, extrinsic work values, prestige work values, altruistic work values and social work values. Literature that relates to organisational commitment was also reviewed. Researchers have categorised organisational commitment as follows: affective commitment, continuance commitment and normative commitment. The three dimensions were chosen to be used in the study. Literature relating to job satisfaction was reviewed and the final section of the literature review examined the relationships among the five constructs under study. The next chapter examines methodology issues.

CHAPTER 3

RESEARCH DESIGN AND METHODOLOGY

3.1.0 Introduction

Chapter 2 provided a review of literature that related to generational differences, work motivation, work values, organisational commitment and job satisfaction. This chapter focuses on the methodological section of the study. The aim of this research, as outlined in chapter one, was to integrate these five constructs as they relate to generational differences. Specifically this study was an exploration of generational differences in sources of motivation, work values, organisational commitment and job satisfaction among workers in the Gauteng region of South Africa.

The participants were made up of 146 males and 162 females which translate to 48% and 52% respectively. The generations were represented by the following: Baby Boomers- 74, Generation X, - 119 and Generation Y- 115. The participant population consisted of employees working for corporate companies in the Gauteng Region of South Africa, particularly those which participate in career exhibitions at The University of the Witwatersrand and have e-mail addresses available at the CCDU. The generalisability of the results may therefore be questioned and this is acknowledged under the limitations of the study.

The following chapter outlines the methodology applied to investigate the relationships.

3.1.1 Placement of research within research paradigms

According to Easterly-Smith, Thorpe, and Lowe (2002, p. 27) the relationship between theory and data is an issue that has been hotly debated by philosophers for many centuries and failure to think through philosophical issues may seriously affect the quality of management research. The aim of this section is to briefly consider the main philosophical positions that underlie the designs of management research and also place the research within research paradigms. Easterly-Smith et al. (2002) argue that there are at least three reasons why it is important for a researcher to understand philosophical issues. First, it can help to clarify research designs. This involves considering what kind of evidence is required and how it is to be gathered and interpreted (Easterly-Smith et al., 2002). Second, knowledge of philosophy can help the researcher to recognise which designs will work and which will not (Easterly-Smith et al. 2002, p. 27).

It may then be possible to recognise the limitations of particular approaches. Third, knowledge of philosophy can help the researcher identify designs that may be outside his or her experience.

Easterly-Smith et al. (2002) identify two philosophical schools of thought; positivism and social constructionism also referred to as interpretivism. The key idea of positivism is that the social world exists externally and that its properties should be measured though objective methods rather than being inferred subjectively through sensation or intuition (Easterly-Smith et al., 2002, p. 28).

Social constructionism on the other hand posits that reality is determined by people rather than by objective and external factors and therefore the task of the social scientist should not be to gather facts and measure how often certain patterns occur, but to appreciate the different constructions and meanings that people place upon their experience (Easterly-Smith et al., 2002, p. 30). The social constructionism perspective argues that the focus should therefore be on what people, individually and collectively are thinking and feeling.

Burrell and Morgan (1979, p. 23) identify four paradigms which they label as "radical humanist", "radical structuralist", "interpretive" and "functionalist." Burrell and Morgan (1979) argue that the four paradigms define fundamentally different perspectives for the analysis of social phenomenon. A paradigm is defined by Burrell and Morgan (1979) as a term which is intended to emphasise the commonality of perspectives which binds the work of a group of theorists together in such a way that they can be usefully regarded as approaching social theory within the bounds of the same theme. Burrell and Morgan (1979, p. 23) however, argue that the definition does not imply complete unity of thought but allows for the fact that within the context of any paradigm there will be much debate between theorists who adopt different standpoints. To be located in a particular paradigm is to view the world in a particular way (Burrell and Morgan (1979).

Table 3-1. Contrasting implications of positivism and social constructionism

	Positivism	Social Constructionism
The observer	Must be independent	Is part of what is being observed
Human Interests	Should be irrelevant	Are the main drivers of science
Explanation	Must demonstrate causality	Aim to increase general understanding of the situation
Research progresses through	Hypotheses and deductions	Gathering rich data from which ideas are induced
Concepts	Need to be operationalised so that they can be measured.	Should incorporate stakeholder perspectives
Units of analysis	Should be reduced to simplest terms	May include complexity of whole situations
Generalisation through	Statistical probability	Theoretical abstraction
Sampling requires	Large numbers selected randomly.	Small numbers of cases chosen for specific reasons

Source Easterly-Smith et al. (2002)

The assumptions of these schools of thought have their basis on Ontology: the assumptions that are made about the nature of reality and epistemology, the general set of assumptions about the best ways of inquiring into the nature of the world (Easterly-Smith et al., 2002, p. 30). It is not in the scope of this study to examine the merits and demerits of each school of thought, suffice to say that this research study would be most closely related with the positivist, school of thought and the aim is testing of theory through research.

3.2.0 Sampling theory

From the point of view of positivists, empirical research normally requires the selection of those individuals who are to provide the information (Remenyi, Williams, Money & Swartz, 1998, p. 198). Ideally the sample is chosen so that no significant difference exists between the sample and the population in any important characteristics. When discussing sampling, it is important to take into account the challenges associated with sampling. The researcher assumes that the sample will adequately resemble the population under study, for if it is not, then the results may be biased and will not be representative of the population. One assumption is that some elements in the sample will underestimate a population value, and others will overestimate this value (Sekaran, 2003). The arithmetic mean then becomes a good estimate of the population mean (Sekaran, 2003).

A good sample is one that has both accuracy and precision. An accurate sample is one in which there is little or no bias and a sample with adequate precision is one that has a sampling error that is within acceptable limits (Sekaran, 2003).

There are two main types of sampling techniques that a researcher can choose from, and these are probability and non-probability sampling. Probability sampling is based on random selection which is a controlled procedure that ensures that each population element has an equal chance of selection (Welman, Kruger & Mitchell, 2011). In contrast, non-probability selection is not random (Sekaran, 2003). In the case of probability sampling one can determine the probability that any element or member of the population will be included in the sample (Welman et al., 2011). Generally, random sampling is the most attractive type of probability sampling. There are instances however, when it may be desirable to use non random sampling.

Non-probability sampling means that potential respondents do not have an equal chance of participating in the research. Some of the advantages of using a non-probability sample lie in the fact that it is cost-effective and less time consuming. However, its associated shortcomings relate to its restricted generalisability (Sekaran, 2003). To overcome disadvantages with respect to generalisability, Sekaran (2003) maintains that it is advisable to use larger samples.

Non-probability sampling has some advantages that have been identified as accounting for its widespread use. Probability sampling is not always feasible because the population may not be readily accessible leaving the researcher with no choice but to use non-probability sampling. Perhaps the most compelling of all, advantages of non-probability sampling is that it is usually less expensive to conduct than probability sampling (Cooper & Schindler, 1998). The population of the study were workers in corporate companies within the Gauteng region of South Africa. Convenience and snowballing sampling were used in the present study. It was recognised that accessing the members of the three generations of interest in the study was going to be a challenge without the assistance of managers. Following the approval of the dissertation proposal by the Ethics Committee of the university, formal inquiries were made with potential organisations for their permission to participate in the study.

The managers whose e-mail addresses and phone numbers are readily available in the career booklets distributed to students by the Counselling and Careers Development Unit of the University of the Witwatersrand were contacted and asked to send the questionnaire to as many employees as possible. This was considered to be snowballing. Other questionnaires were distributed as hard copies to individuals working for corporate companies in the Gauteng region and this was convenience sampling. The rational was that these companies would be representative of corporate companies in South Africa.

3.2.1. Convenience sampling

Convenience sampling is generally used in exploratory research where the researcher is interested in getting an inexpensive approximation of the truth (Cooper & Schindler, 1998). As the name implies, the sample is selected because they are readily available. This non-probability method is often used during preliminary research efforts to get an estimate of the results, without incurring the cost or time required to select a random sample (Cooper & Schindler, 1998).

3.2.2 Snow balling

In some instances the only feasible way to find members is by dealing with few members who will then refer the researcher to other members. The first step in this procedure is to find a few members of the population using any method. This step is denoted as the first round (Remenyi et al., 1998). Then the researcher asks each of these first-round members if they know of any others who may possess the characteristics the researcher is interested in. The names given will constitute the second round. Then the researcher approaches each of those second-round people, and asks them for more names. This process is repeated for several more rounds until either the researcher has received enough responses or is getting names that he or she has been getting in the initial rounds (Remenyi et al., 1998).

The Counselling and Careers Development Unit of the University of the Witwatersrand annually distributes to students booklets with email addresses and contact names of companies that participate in career exhibitions at the university. Close to a 100 companies have their websites and names and email addresses of contact people in the booklets.

The aim of the study was to examine generational differences in the work place within the Gauteng region, so only those companies whose addresses were in the Gauteng region were chosen and they were fifty in total. This was taken to be representative of corporate companies within the Gauteng region. Using the e-mail addresses available in the career booklets, e-mails were sent to the contact people, requesting them to send the questionnaire to as many employees as possible. This was the snowballing section of the sampling method. In order to minimise on method bias as well as reach out to those sections of the sample which did not have access to e-mail, hard copies of the questionnaire were printed and either delivered to companies or people working for these companies were given to distribute to colleagues and friends. This constituted convenience sampling.

The study used a self-administered survey for a participant population consisting of employees working for corporate companies in the Gauteng Region of South Africa. The research was conducted at the individual level which is consistent with previous research on generational differences, organisational commitment, job satisfaction, and employee motivation. Part of the survey was administered via the internet with respondents asked to respond via e-mail. The rapid growth of the internet has opened up new opportunities for collecting and disseminating information (Deutskens, Ruyer, Wetzels & Ooskeveld, 2004).

Literature on e-mail surveys has gathered evidence that the most important factors for maximising response rate and response quality are follow-up mailings and incentives, (Deutskens et al., 2004). Previous research has revealed that sending the follow up mail immediately after the majority of respondents have reacted to the initial mailing has been identified as essential for maximising response rate (Deutskens et al., 2004). Ilieva (2002) argues that the average response time in on-line surveys is 5.95 days compared to 12.21 days for traditional mail surveys. Follow ups should therefore be sent out earlier for on-line mail surveys than traditional mail surveys.

There are a number of advantages of using an electronic survey over other types of surveys. One of the major advantages is cost, since electronic surveys do not require postage, printing costs, or involvement of interviewers. According to Deutskens et al. (2004) electronic surveys cost about one tenth of the cost of a comparable mail survey. The other advantage of e-mail surveys is having instant access to a wide audience, regardless of their geographical location, and being fast.

3.2.3 Data Collection

The sampling frame for the self-administered, survey consisted of the entire population of employees working for corporate companies in the Gauteng region. Using e-mail addresses found in the annual booklets distributed by the Counselling and Career Development Unit department of the University of the Witwatersrand (CCDU) section of the university, e-mails were sent to the contact email addresses and the contacts were requested to distribute the questionnaires to as many workers as possible. Confidentiality was maintained, since all data that was downloaded or collected in paper or electronic format will be kept under lock or password protection for the duration of the study. As a final precaution, all data analysis was aggregated and captured onto an excel spread sheet and each questionnaire was allocated a number to protect the identity of individuals.

The demographic data for this study was collected anonymously and only included a request for age in a range of years, gender, tenure, educational qualifications, race, and health status of the respondent. No other personal information was collected in the survey.

3.2.4 Profile of the sample

E-mails were sent to fifty companies using the email addresses found in the booklets supplied by the Counselling and Career Development Unit department of the University of the Witwatersrand. The rationale was that since these companies already have a relationship with the university, it would easy to get cooperation from the managers. A covering letter was sent with the e-mail informing the recipient of the nature of the study, what it will be used for, the time taken to complete it and the date by which it should be returned. Anonymity was guaranteed. 235 responses were received from twelve companies. Of these 235, fifteen were partially filled in, resulting in them being rejected as incomplete. The remaining responses were 220. Hard copies of the questionnaire and consent letters were distributed to more companies within the Gauteng region using friends and relatives who work for these companies and 90 completed responses were collected from these companies. Of these 90 two were incomplete and thus were rejected. The total responses from the two samples were 308.

3.3.0 ETHICAL CONSIDERATIONS

The information gathering process was not threatening to respondents as they had a choice to either participate or decline to do so. No personal questions were asked except for initial demographic questions. Given the topic under study and the anonymity provided to the respondents, there was little risk for harm to participants in the study. As a fundamental precaution, the proposed research was approved by the Ethics Committee of the University of the Witwatersrand. The study was not personally intrusive and no human experiments were conducted. The study therefore did not create an environment that might result in physical or emotional harm to participants. Furthermore, the research was conducted with full disclosure to the participants and participants were required to agree to informed consent before participating. A cover letter explained that anonymity would be maintained and that information will not be disclosed to anyone outside the research possess was sent together with the questionnaire.

3.4.0. THE INSTRUMENTS.

The scales used in this research were derived from previous research. All of the processes of the research followed research precedent. The instrument was standardised and the language used in the instrument items was developed to be as simple as possible and to contain no ambiguous items. Anonymity and confidentiality were stressed so as to ensure lower levels of bias from respondents. The instrument was largely made up of items using Likert scales in order to meet the requirements of interval data. The study utilised the following instruments: the Motivation Sources Inventory developed by Barbuto and Scholl (1998), Lyon's (2003) Work Value Survey instrument and Allen and Meyer's (1990) Organisational Commitment Scale. Job satisfaction was measured by using Hoppock's (1935) Job satisfaction measure. Nichols, Stahl and Manley (1978) evaluated Hoppocks (1935) measure in terms of its distribution, construct validity, concurrent validity, convergent validity and reliability and found that although developed a long time ago, Hoppock's (1935) job satisfaction measure still has significant utility in modern organisations. The instruments mentioned above were shortened to attain a balance between data obtained and the time taken to fill in the questionnaire.

The final instrument was mainly composed of closed questions, requesting respondents to rate their agreement with given statements. A symmetrical scale of five points was chosen with a mid-point to cater for those who may be undecided in their responses. Remenyi et al. (1998) state that the assumption by those who use closed questions is that detailed knowledge is available on the attributes of interest and therefore it is possible to pre-specify the categories of responses.

To test for reliability, Cronbach's alphas were used to judge the internal consistency of the variables and factor analysis also carried out to test the validity of the questionnaire. These tests are found in Chapter four which deals with analysis of results. Pre-testing of Cronbach's alpha was done during piloting in order to support the decision to use the scales adapted and the results were all within the acceptable lower limit of .70.

In the following sections, the eight hypotheses to be tested in this research are introduced in relation to the measures used to test them. These sections are structured around the different hypotheses which correspond to the structure of the reporting of the results in Chapter 4. First, the measure of the independent variable, cohort membership is discussed. The measure of the independent variable is introduced as follows.

3.4.1 Generational membership

Generational membership or age cohorts were measured by using the six age categories used in previous studies (Noble & Schewe 2003; Schewe & Meredith 2004). Respondents were asked to self-report on their age using the following six age categories: 17-20, 21-29, 30-39, 40-49, 50-59 and 60 or older.

The aim of the study was to examine possible differences across the generational cohorts that make up the South African workforce and the above age groups mainly fall under three generational cohorts; Generation Y, Generation X and Baby Boomers. The six age categories were then collapsed into the three generational groups of interest. Jackoby and Matell (1971) conducted a study on whether or not there are an optimum number of response categories or at least a number beyond which there is no further improvement in discrimination between the rated items and found that both reliability and validity are independent of the number of scale points used for Likert-type items.

Jackoby and Matell's (1971) study therefore justifies the use of three item scales. From literature review, Generation Y is expected to have ages ranging from 11-29, Generation X ranging from 30-46 and Baby Boomers ranging from 47 -65. These ranges are covered by the six age categories described above. In analysing the results, the generational cohorts were measured using the summary of age groups above, with 1 representing Generation Y, 2 representing Generation X and 3 representing Baby Boomers. Thus, in the analysis section, age is used as a proxy for the three generational cohort groups. In the following section, the null-hypothesis is used as a heading, and the measure used to test each hypothesis is explained. The hypotheses and measures associated with each are discussed as follows.

3.4.2. Sources of motivation

Null-hypothesis 1: There is no significant association between age and sources of motivation.

Work motivation was measured using Barbuto and Scholl's (1998) Motivation Sources Inventory which divides motivation into five sub scales. The five sub scales are intrinsic process motivation, extrinsic process motivation, goal internalisation motivation, internal-self motivation and external-self motivation. Previous studies which have used these sub scales have achieved acceptable reliability estimates (Barbuto & Miller, 2008, .77; Ryan 2010, .79). In order not to have an instrument that is too long thereby scaring potential respondents, three question were selected for each sub scale, resulting in the section of the instrument that measured sources of motivation having fifteen questions.. This scale took the form of five-point Likert-type scales used in previous studies. Respondents were asked to rate the degree to which they agreed with a given statement 1-strognly disagree, 2-disagree, 3-neither agree nor disagree, 4- agree and 5- strongly agree. Pre-testing of the instrument using Cronbach's alpha showed results which were above the recommended limit of .70. These results are shown in the next chapter.

3.4.3 Work values

Null-hypothesis 1: There is no significant association between age and work values.

Work values were measured using items from the Work Value Survey developed by Lyons (2003). The items represent a wide range of work aspects. Lyons (2003) factor analysed the items and found that they loaded on the following five factors; intrinsic work values, extrinsic work values, prestige work values, altruistic work values and social work values. The five factors mentioned above were utilised in the present study. Factor analysis carried out in this study supported this differentiation. Respondents were asked to indicate the value they place on each given item by rating its importance on a five point likert scale; "Not at all important, to very important ." The scoring was 1 for "Not at all important" to 5 for "very important". Pre-testing results for this measure are found in the next chapter.

3.4.4. Organisational commitment

Null-hypothesis 1: There is no significant association between age and organisational commitment.

The scales used in this research to measure organisational commitment were derived from Allen and Meyer's (1990) Organisational commitment Questionnaire. A number of statements related to individuals' attitudinal commitment to their organisation were used to rate the respondent's agreement or disagreement with the statements on a five point Likert scale. While there are alternative measures, this scale is the most frequently used instrument for the measurement of organisational commitment, and has been used in numerous recent studies (Subramanian, McManus & Lokman, 2002). Scale reliabilities in these studies have been good. For example Subramaniam et al. (2002) reported scales ranging from .82 to .93 for the 15-item scale. The scales were piloted before use and the Chronbach's Alpha value for the three dimensions of organisational commitment were above .70. The results are reported in the next chapter.

3.4.5 Job satisfaction.

Null-hypothesis 1: There is no significant association between age and job satisfaction.

Job satisfaction was measured using five-point Likert-type scales, adapted from Hoppock's (1935) Job Satisfaction Scale. The items in the scale focus on the employee's feelings or reactions towards aspects of their job. Each item had 5-point Likert response categories. Pre-testing of Cronbach's alpha yielded values above.70. The results are in the next chapter.

3.5.0 RELIABILITY

Easterby-Smith, et al. (2002, p. 52) state that there is an underlying anxiety among researchers of all persuasions that the research will not stand up to outside scrutiny, and this is understandable since most research can be attacked on methodological grounds. The terms validity and reliability vary considerably with the philosophical viewpoint adopted.

The table below summarises the differences between positivists, relativists and constructivists viewpoints from (Easterby et al., 2002, p. 53).

Table 3-2. Perspectives on validity, reliability and generalisability below.

	Positivist	Viewpoint Relativist	Constructionist
Validity	Do the measures correspond closely to reality?	Have a number of perspectives been included?	Does the study clearly gain access to the experiences of those in the research setting?
Reliability	Will the measure yield the same results on other occasions?	Will similar observations be reached by other observers?	Is there transparency in how sense was made from raw data?
Generalisability	To what extent does the study confirm or contradict existing findings in the same field?	What is the probability that patterns observed in the sample will be repeated in the general population?	Do the concepts and constructs derived from this study have any relevance to other settings?

Source: Easterby et al. (2002).

According to Sekaran (2003), reliability refers to whether an instrument is consistent, stable and free from error despite fluctuations in test taker, administrator or conditions under which the test is administered. According to Schatzman and Strauss (1973) reliability refers to consistency or stability of scores. This may take the form of Test-retest reliability which refers to the consistency of scores over time. Reliability refers to the consistency with which a research instrument measures a single construct. Defined broadly, reliability is concerned with whether the researcher is obtaining data on which she or he can rely.

Reliability may be impaired if the data are not independent of the 'accidental circumstances' under which they were gathered, (Schatzman & Strauss, 1973).

3.6.0 VALIDITY

Easterby-Smith et al. (2002, p. 53) contend that classic text books on methodology distinguish between three main kinds of validity: construct, internal and external validity.

The former refers to whether the instruments are accurate measures of reality; the second asks whether the research design is capable of eliminating bias and the effects of extraneous variables, and the third involves defining the domains the results of the study may be generalised (Easterby-Smith et al. (2002, p. 53).

There has been some reluctance to apply ideas of validity and reliability to interpretive and social constructivist research because they might imply acceptance of one absolute positivist reality (Easterby-Smith et al. (2002, p. 54). Ghauri and Gronhaug (2005, p. 83) state that convergent validity tells us to what extent multiple measures of methods for measuring the same construct yield comparable results. Discriminant validity refers to the lack of correlation between variables that are not supposed to correlate with each other (Easterby-Smith et al., 2002).

Remenyi et al. (1998, p. 178) defines construct validity as establishing correct operational measures for the concepts, ideas, and relationships being studied. To meet the test of construct validity the researcher must have covered two steps:

- Carefully identify ideas, concepts relationships and issues which are to be studied.

- Demonstrate that the measures to be used in the research actually address the ideas, concepts relationships and issues being studied (Remenyi et al., 1998).

To address the concerns raised by Remenyi et al. (1998) the literature section of the study covered the issues and relationships and the research instruments used in this study were adapted from precedent.

3.7.0 DATA ANALYSIS

3.7.1 Statistical methods

After the receipt of the completed questionnaires, data was captured onto an excel spread sheet for further importation onto the (SPSS version 19) software. To test hypotheses, a number of statistical techniques were used. These included both descriptive and inferential statistical techniques. Tests for Cronbach's α were carried out during piloting and items in the questionnaire which were found to have scores of less than 0.70 were removed. The tests were repeated after the collection of the main data.

3.7.2. Descriptive statistics

Descriptive statistics describe the phenomena of interest (Sekaran, 2003) and is used to analyse data for classifying and summarising numerical data. It includes the analysis of data using frequencies, dispersions of dependent and independent variables and measures of central tendency and variability, and helps the researcher to obtain a feel for the data (Sekaran, 2003). The mean and standard deviation were primarily used to describe the data obtained from the different generations.

3.7.3. Inferential statistics

Inferential statistics allow the researcher to present the data obtained in research in statistical format to facilitate the identification of important patterns and to make data analysis more meaningful (Welman et al., 2011). According to Sekaran (2003) inferential statistics is employed when generalisations are made from a sample to a population. The statistical methods used in this research included the Pearson product-moment correlation coefficient, Spearman's correlation coefficient, Kendall's tau and multiple linear regression analysis and ANOVA. Independent *t*-tests were performed between groups to determine where the differences were on the survey item.

3.7.4 Summary of chapter

In this chapter, the methodology applied in this research was introduced and discussed. The research was located in relation to different paradigms. The quantitative analysis process was explained and issues relating to the research design, the study population and sampling were considered. The sampling process and sampling protocol were then discussed. Reliability and validity were also discussed. The process used to develop the scales of measurement was also explained. Measures were introduced in relation to hypothesis used to test them. Statistical tests used to test hypothesis were introduced. The next chapter reports on the results of the research.

CHAPTER 4

ANALYSIS OF RESULTS

4.1.0 INTRODUCTION

The focus of this chapter is the analysis of results obtained in this study. Descriptive statistics will be presented first. Thereafter, bivariate and multivariate results will be reported under the headings that represent the hypothesis tested. The first section deals with the results of piloting carried out, followed by reliability test on actual scales. Cronbach's α and factor analysis were used to test validity. The major hypothesis of the study, which was to investigate the association between sources of motivation, work values, organisational commitment and job satisfaction, was explored using Pearson's product moment and non-parametric tests were used to validate the results of parametric tests.. Finally, the results of the t-test are presented to compare the means of the different generations.

In this study the following analysis were used in order to test the hypotheses and achieve the research objectives:

- 1. Descriptive statistics

  To examine the frequency distribution, mean variation and percentage distribution of each variable across the three generations.

- 2. Reliability analysis

  Cronbach's alpha is used to judge the internal consistency of the variables under study. Devellis (1991) criteria were used to accept or reject the items of the questionnaire. The acceptable lower limit for the items is .65 and any Cronbach's alpha value less than .65 means that the item should be deleted. Factor analysis was also used to test the validity of the questionnaire.

- 3. Regression analysis

  Regression analysis is used to explore the relationship between dependent and independent variables. In the study the main independent variable is age (representing cohort membership) which is regressed against sources of motivation, work values, organisational commitment and job satisfaction. Sources of motivation and work values are treated as independent variables against also organisational commitment and job satisfaction.

- 4. Independent t-test

  Independent t-test is used to examine whether there are differences among the four variables under study: sources of motivation, work values, organisational commitment and job satisfaction among the three generations of interest.

The research utilised two testing methods parametric and non-parametric methods. Although Parametric tests were largely applied in this research, non-parametric measures were also included for instances where data did not meet the assumptions required for parametric tests. Non-parametric tests were used in order to confirm the results of parametric texts. Where data was found to require transformation, two types of transformation were carried out: log transformation and square root transformation. Outliers were also identified and removed using Mahalanobis distance, Cooks distance and leverage, and then multivariate tests were repeated. Pre-testing of the instrument was followed by the testing of the actual instruments used in the research.

4.1.1 Pre-testing the questionnaire

After developing the questionnaire, reliability testing was carried outon the questionnaire using a pilot study. Internal consistency and reliability may be gained by checking the items of the questionnaire against each other (Field, 2011). De Vellis (1991) developed criteria about acceptable reliabilities for research instrument scales, and the recommendations were followed in the present study. Below are the guidelines developed by De Vellis (1991).

Table 4-1.De Vellis (1991) guidelines, below.

Cronbach's α below 0,60	Unacceptable
Cronbach's α between 0,60 and 0,65	Undesirable
Cronbach's α between 0,65 and 0,70	Minimally acceptable
Cronbach's α between 0,70 and 0,80	Respectable
Cronbach's α between 0,80 and 0,90	Very good

Source: De Vellis (1991)

According to De Vellis (1991) if the item's Cronbach's α is less than 0, 65, it should be deleted to increase the reliability.

4.1.2 Pre-test for measures of reliability

Reliability means that the measure should consistently reflect the construct that it is measuring (Field, 2011). Cronbach's α is used in research to measure reliability. It is generally accepted that a value of .70 to .80 is an acceptable value and values lower than that indicate an unreliably scale.

In the reliability tables below, the column labelled "Correlated Item-Total Correlation" are the correlations between each item and the total score from the questionnaire. In a reliable scale, all items should correlate with the total (Field, 2011, p. 678). The items to take note of are those that do not correlate with the overall score from the scale; if any of these values is less than .3 then that particular item does not correlate very well with the overall scale, and these may have to be dropped (Field, 2011, p. 679). For the present data, all data have item-total correlations above .3 and that means no items needed to be dropped.

The values in the column labelled "Cronbach's α if item is deleted" are the values of the overall alpha if that item is not included in the calculation (Field, 2011, p. 678). The values reflect the change in Cronbach's α that would result if that particular item was deleted (Field, 2011). Most importantly, the value of Alpha in the column labelled Cronbach's α is the overall reliability of the scale. Because all the values for all constructs were above the acceptable limit of .70 there was no need to delete any items.

Sources of motivation were measured using five factors, and the scale had 15 items. The table below presents the reliability analysis of the five factors.

Table 4-2. Results of the reliability analysis for motivation (pre-test) below.

Dimension	Factor	Item	Corrected item –Total Correlation	Cronbach's α if item is deleted	Cronbach's α
Sources of motivation	Intrinsic motivation	4	**.091**	**.863**	**.711**
		5	.610	.573	
		6	.560	.609	
	Extrinsic motivation	7	.302	**.864**	**.786**
		8	.673	.691	
		9	.614	.726	
	Internal self-motivation	10	.631	.726	**.793**
		11	.482	**.822**	
		12	.523	.779	
	External self-motivation	13	.724	.863	**.885**
		14	.745	.855	
		15	.752	.852	
	Goal internalisation motivation	16	.661	.750	**.812**
		17	.580	.798	
		18	.521	.813	

Table 4-2 shows reliability analysis for Sources of motivation (pre-test). Cronbach's α values are above the recommended value of .70

Table 4-3. Results for reliability for work values below.

Dimension	Factor	Item	Corrected item –Total Correlation	Cronbach's α if item is deleted	Cronbach's α
Work Values	Intrinsic work values	19	.791	.659	**.803**
		20	.686	.730	
		21	.180	**.895**	
	Extrinsic work values	22	.592	.784	**.807**
		23	.609	.766	
		24	.427	**.840**	
	Prestige work values	25	.776	.616	**.782**
		26	.625	.718	
		27	.211	.877	
	Altruistic work values	28	.445	.719	**.734**
		29	.416	.734	
		30	.425	.756	
	Social work values	31	.725	.884	**.877**
		32	.697	**.885**	

Cronbach's α values were above the recommended value of .70 therefore there was no need to remove any item.

Table 4-4**.** Results of reliability analysis for commitment (pre-test) below.

Dimension	Factor	Item	Corrected item –Total Correlation	Cronbach's α if item is deleted	Cronbach's α
Organisational Commitment	Affective commitment	34	.574	.833	**.835**
		34	.652	.798	
		36	.645	.810	
	Continuance commitment	37	.802	.713	**.830**
		38	.788	.720	
		39	.275	**.940**	
	Normative commitment	40	.543	**.855**	**.836**
		41	.502	**.881**	
		42	.771	.756	

Table 4-4 above shows reliability analysis for organisational commitment. Organisational Commitment had three factors and was measured using nine items. From the table above it can be seen that Cronbach's α of all the items is above .80 and the value of item to total correlation is above .3 except for Continuance Commitment. Therefore, there is no need to delete any item, even for continuance commitment since the overall Cronbach's α is above .80.

Table 4-5. Results for reliability analysis for Job Satisfaction (pre-test) below.

Dimension	Factor	Item	Corrected item – Total Correlation	Cronbach's α if item is deleted	Cronbach's α
Job satisfaction	Job satisfaction	43	.747	.591	**.743**
		44	.584	.668	
		45	.465	.715	
		46	.398	.735	

The Cronbach' α for job satisfaction was above .70.

After collecting data, the next stage involved analysing the data, graphically to see whether any patterns emerge as well as fitting statistical models to the data. Below is the analysis of the results section.

4.1.3 Testing for normality

The assumption of normality is a prerequisite for many inferential statistical techniques and is a key assumption for parametric tests (Coakes, & Steed, 2000; Pallant, 2007). This assumption was first explored graphically using a visual examination of all histograms, box-plots, and normal probability Q-Q plots. Furthermore, a number of statistics, including skewness and kurtosis were obtained. The histograms appeared not to be perfect, and showed varying degrees of skewness and kurtosis, which is not consistent with a normal distribution. Most distributions were significantly different from a normal distribution; that is, they were non-normal. In dealing with non- normal data one may carry out non parametric tests such as Spearman's correlation or Kendal's Tau. Alternatively, transforming the data may assist. In this study both parametric and non-parametric tests were explored. Data was also transformed.

4.1.4 Frequency distributions

Once data has been collected it is important to plot a graph to show how many times each score has occurred. This is known as frequency distribution or histogram (Field, 2011) which is a graph plotting values of observations on the horizontal axis with a bar showing how many times each value occurred in the data set. Frequency distributions can be useful for properties of the distribution of scores (Field, 2011, p. 18). Frequencies, however, come in many different shapes and sizes. Ideally, they should be distributed symmetrically around the mean (Field, 2011). This is known as a normal distribution and is characterised by a bell-shaped curve (Kohler 2002). There are, however, two ways in which a distribution can deviate from normal: lack of symmetry known as skewness and pointyness known as kurtosis (Field, 2011). Skewed distributions are not symmetrical; instead, the most frequent scores are clustered at one end of the scale. A skewed distribution can either be positively skewed (the frequent scores are clustered at the lower end and the tail points towards the higher or more positive scores) or negatively skewed (the frequent scores are clustered at the higher end and the tail points towards the lower or more negative scores) (Field, 2011, p. 19).

While these measures of central tendency coincide in the use of zero skewness, the mean is pulled toward the extreme values in the case of positive and negative skewness (Kohler 2002. p 259).

As already mentioned, distributions also vary in their kurtosis which refers to the degree in which scores cluster at the ends of the distribution and how pointy a distribution is (Field, 2011). A distribution with positive kurtosis has many scores in the tails and is pointy and is also known as a leptokurtic distribution (Kohler, p 260). A distribution with negative kurtosis however, is relatively thin in the tails and tends to be flatter than normal and is called platykurtic (Field, 2011, p. 19). Field states that ideally the data must be normally distributed. In a normal distribution, the value of skew and kurtosis is .0. If a distribution has values of skew or kurtosis above or below 0 then this indicates a deviation from normal (Field, 2011, P. 19). Because some of the demographic data was not interval, frequency tables were selected rather than histograms with normal distributions.

Below are frequency tables on the demographic characteristics of the sample. Males are represented by 0 and females are represented by 1.

Table 4-6. Results of Gender distribution below.

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	162	52.4	52.6	52.6
	1	146	47.2	47.4	100.0
	Total	308	99.7	100.0	
Missing	System	1	.3		
Total		309	100.0		

Table 4-6 shows the frequency distribution in terms of gender. Figure 0 represents male and 1 female. Table 4-6 shows that there was a close balance in terms of representation between males and females with females making up 47% of the sample and males making up 53% of the sample.

Table 4-7. Results of Age distribution below.

Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	115	37.2	37.3	37.3
	2	119	38.5	38.6	76.0
	3	74	23.9	24.0	100.0
	Total	308	99.7	100.0	
Missing	System	1	.3		
Total		309	100.0		

Table 4-7 shows the age distribution of the sample. The number 1 represents Generation Y and number 2 Generation X and number 3 Baby Boomers.

Table 4-8. Results of Health distribution below.

Health

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	5	1	.3	.3	.3
	4	5	1.6	1.6	1.9
	3	52	16.8	16.9	18.8
	2	181	58.6	58.8	77.6
	1	69	22.3	22.4	100.0
	Total	308	99.7	100.0	
Missing	System	1	.3		
Total		309	100.0		

Health was captured using the numbers 5 for extremely healthy, 4 for very healthy, 3 for moderately healthy, 4 for slightly healthy and 1 for not healthy at all. Figure 4-3 above indicates that the majority of the sample considered themselves to be healthy.

Table 4-9. Results of Education distribution below.

Education

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	3	1.0	1.0	1.0
	2	51	16.5	16.6	17.5
	3	50	16.2	16.2	33.8
	4	94	30.4	30.5	64.3
	5	82	26.5	26.6	90.9
	6	28	9.1	9.1	100.0
	Total	308	99.7	100.0	
Missing	System	1	.3		
Total		309	100.0		

Education was captured using the numbers 1 for less than 12 years of education, 2 for 12 years of education (matric or equivalent), 3 for 13 years of education (post matric certificate), 4 for 14 years of education (diploma), 5 for 15 years of education (bachelor degree) and 6 for 16 years of education (post graduate education).

Table 4-10**.** Results of Race distribution below.

Race

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	35	11.3	11.4	11.4
	2	242	78.3	78.6	89.9
	3	11	3.6	3.6	93.5
	4	20	6.5	6.5	100.0
	Total	308	99.7	100.0	
Missing	System	1	.3		
Total		309	100.0		

The majority of respondents were black which was represented by the number 2. Whites were represented by the figure 1, Indians 3 and coloureds 4.

Table 4-11. Results of tenure distribution below.

Tenure

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	34	11.0	11.0	11.0
	2	64	20.7	20.8	31.8
	3	100	32.4	32.5	64.3
	4	109	35.3	35.4	99.7
	5	1	.3	.3	100.0
	Total	308	99.7	100.0	
Missing	System	1	.3		
Total		309	100.0		

Tenure was captured using the number 1 for less than one year, 2 one year or more, 3 three years to five years and 4 for above five years. The majority of respondents had around three or more years of tenure

4.1.5 PARAMETRIC TESTS

Parametric tests are used on parametric data when certain assumptions are true (Field, 2011). If a parametric test is used on the wrong data then the results are likely to be inaccurate. It is therefore important to check the assumptions before deciding which tests are appropriate (Field, 2011). Most parametric tests have four basic assumptions that must be met for the test to be accurate. These are; normally distributed data, Homogeneity of Variance, Interval Data and Independence (Field, 2011).

4.1.6 Assumptions of normality

The assumption of normality is important in research using regression (Field, 2011). It would therefore be useful to test for normality using tests such as P-P plot, Histograms, Skewness and Kurtosis. In the P-P plot, the cumulative probability of a variable is plotted against the cumulative probability of a particular distribution which would be normal distribution (Field 2011, p. 132). The values of skewness and kurtosis should be zero in a normal distribution.

Positive values of skewness indicate a pile-up of scores on the left of the distribution, whereas negative values indicate a pile-up to the right (Field, 2011, p. 133).

Positive values of kurtosis indicate a pointy and heavy tailed distribution, whereas negative values indicate a flat and light- tailed distribution. The further the value is from zero, the more likely it is that the data are not normally distributed (Field, 2011, p. 132). When the assumption of normality is fulfilled, and Y values at any given X are normally distributed, the residuals are normally distributed as well (Kohler 2002).

Other tests that can be used to test for normality are the Kolmogorov-Smornov test and the Shapiro-Wilk test (Field, 2011, p. 144). The tests compare the scores for a sample to a normally distributed set of scores with the same mean and standard deviation (Field, 2011). If the test is non-significant, ($p>.05$) then the distribution of that sample is not significantly different from a normal distribution. If, however, the test is significant, that is ($p<.05$) then the distribution under investigation is significantly different from a normal distribution (Field, 2011, p. 144). The tests, however, have their limitations because larger samples tend to result in significant results from small deviations from normality.

4.2.0 Bivariate analysis

A Bivariate correlation is a correlation between two variables, and partial correlation examines the relationship between two variables while controlling the effect of one or more additional variables (Field, 2011, p. 175).Pearson's product-moment correlation coefficient and Spearman's rho are examples of bivariate correlation coefficients (Field, 2011).

4.2.1 Reliability analysis on the sample

Cronbach's α

A pre-test of the instrument was undertaken above to check the internal consistency reliability test of each item. Using guidelines developed by De-Vellis (1991) items with Cronbach's α of less than .65 were to be deleted if found. Fortunately, all items were above .70 so there was no need to delete any item.

After sending the questionnaire both electronically and in hard copy, a total of 308 valid questionnaires were received. Based on the 308questionnaires, another reliability test was carried out. The results of the test are summarised below.

From the values, it can be concluded that the reliability of all the research variables is high enough to be acceptable. There was no value below .80 and according to De Vellis (1991) values of .80 and above are acceptable.

4.2.2 Reliability analysis for the final instrument

Table 4-12. Results of reliability analysis of the final instrument below.

Dimension	Factor	Cronbach's α
Sources of motivation	Intrinsic Motivation	**.827**
	Extrinsic Motivation	**.836**
	Internal Self-Motivation	**.902**
	External Self-Motivation	**.845**
	Goal Internalisation	**.927**
Work Values	Intrinsic Work Values	**.857**
	Extrinsic Work Values	**.857**
	Prestige Work Values	**.906**
	Altruistic Work Values	**.891**
	Social Work Values	**.914**
Organisational Commitment	Affective Commitment	**.901**
	Continuance Commitment	**.897**
	Normative Commitment	**.843**
Job Satisfaction	Job Satisfaction	**.907**

4.2.3 Factor analysis

Factor analysis was also used to test the validity of the questionnaire. Factor analysis is a technique for identifying whether the correlations between a set of observed variables stem from their relationship to one or more latent variables in the data, each of which takes the form of a linear model (Field, 2011, p. 786)

A principal component analysis (PCA) was conducted on the 42 items with orthological rotation (varimax). The Kaizer-Meyer-Olkin measure verified the sampling adequacy for the analysis. For these data the KMO value is 780 which fall into the range of good values according to Kaizer (1974). It can therefore be assumed that the sample size is adequate for factor analysis. All KMO for individual items were above < .644 which is above the acceptable limit of .5 (Field 2011). Bartlett's test of sphericity χ^2 (861) (3458.611 p< .001) indicated that correlation between items were sufficiently large for principal component analysis. An initial analysis was run to obtain eigenvalues for each component in the data. The original questionnaire had fourteen components and the analysis identified twelve components with eigenvalues greater than Kaizer's criterion of 1 and in combination explained 60% of the variance.

Although Stephens (2002) states that with a sample size of 200 the scree plot provides a fairly reliable criterion for factor selection. Field (2011) argues that factor selection should not be based on this criterion alone. Kaizer (1960) recommended retaining all factors with eigen-values greater than 1. Jollife (1972) however, argues that Kaizer's (1960) criterion is too strict and suggests retaining all factors with eigenvalues greater than 0, 7. Given the sample size and Kaizer's (1960) criterion as well as Jolliffe's (1972) recommendations, all the fourteen components were retained. Appendix B1 shows the factor loadings after rotation and the items that cluster on the same components. The 12 components measure the four variables under study: sources of motivation with its five dimensions and work values also with five dimensions. However organisational commitment seems to load on one factor for the three dimensions hence suggesting that the three dimensions actually measure one thing. Job satisfaction had one dimension and loaded on one factor.

Table 4-13. Results of attributes of the respondents below.

	Frequency	Percentage
Gender		
Male	162	52.6
Female	146	47.4
Age		
Baby Boomers	74	24.0
Generation X	119	38.6
Generation Y	115	37.3
Health Status		
Extremely Healthy	69	22.4
Very Healthy	181	58.8
Moderately Healthy	52	16.9
Slightly Healthy	5	1.6
Not Healthy at all	1	.3
Level of Education		
Less than High School	3	1.0
Matric or equivalent	51	16.6
Post matric Certificate	50	16.2
Diploma	94	30.5
Bachelor Degree	82	26.6
Post Graduate	28	9.1
Race		
White	35	11.4
Black	242	78.6
Indian	11	3.6
Coloured	20	6.5
Other	0	0
Tenure		
Less than one year	34	11.0
0ne year to more than two years but less than three years	64	20.8
Three years to five years	100	32.5
More than five years	109	35.4

Table 4-7 above depicts the characteristics of the sample. The gender distribution was 52.6% for males and 47.4% for females. Generation X had the largest representation of 38% followed closely by Generation Y at 37%.

4.2.4 Pearson's product moment

The following section sets out to test hypothesis 1-4. Correlation is used to examine the relationship between age and the four dependent variables, namely work values, sources of motivation, organisational commitment and job satisfaction. The results of correlation analysis were divided into four parts in the following tables and analysis. These four are: (1) the influence of age on sources of motivation (2) the influence of age on work values (3) the influence of age on organisational commitment (3) the influence of age on job satisfaction. Age, as already mentioned is used as a proxy for cohort membership and has three levels which represent the three generations under study.

4.2.5 Assumptions

Pearson's correlation requires only data that are interval for it to be an accurate measure of the linear relationship between two variables. The other assumption required for the test statistic to be valid is that the sampling distribution be normal (Field, 2011). Correlation measures the strength of the linear association between x and y, and the statistical measure is called Pearson's correlation coefficient, which computes the correlation between two ratio-scaled (numeric) variables (Wegner, 2010, p. 418). In interpreting the correlation matrix, the following points need to be taken into account: a low correlation does not necessarily imply that the variables are unrelated, but simply that the relationship is poorly described by a straight line, and a nonlinear relationship may exist (Wegner, 2010, p. 418). A correlation does not imply a cause and effect relationship; it is merely an observed statistical association (Wegner, 2010, p. 418). In the tests carried out age was used as a proxy for cohort membership since cohort membership could only be identified through age groups. The objective of the study was to test the association between cohort membership and sources of motivation, work values, organisational commitment and job satisfaction therefore correlation is appropriate.

Below are results of correlation between age and intrinsic motivation.

Table 4-14. Results of correlation between age and intrinsic motivation below.

Correlations.

		Age	Average Intrinsic motivation
Age	Pearson Correlation	1	-.365**
	Sig. (2-tailed)		.000
	Sum of Squares and Cross-products	183.542	-60.579
	Covariance	.598	-.197
	N	308	308
Average Intrinsic motivation	Pearson Correlation	-.365**	1
	Sig. (2-tailed)	.000	
	Sum of Squares and Cross-products	-60.579	150.451
	Covariance	-.197	.490
	N	308	308

**. Correlation is significant at the 0.01 level (2-tailed).

Table 4-14 above provides a matrix of the correlation coefficients for age and intrinsic motivation. Underneath each correlation coefficient both the significance value of the correlation and the sample size N on which it is based are displayed. Age is perfectly correlated with itself so r=1. Age however is moderately negatively related to intrinsic motivation with a Pearson correlation coefficient of r=.-365; p< .0.001. The significance value tells us that the probability of getting a correlation coefficient this big in a sample of 308 people if the null hypothesis were true is very close to zero (Field, 2011). Hence we gain confidence that there is a genuine association between age and intrinsic motivation. The null hypothesis that there is no association between age and intrinsic motivation is therefore rejected.

Table 4-15. Results of correlation between age and extrinsic motivation below.

Correlations

		Age	Average Extrinsic motivation
Age	Pearson Correlation	1	.174**
	Sig. (2-tailed)		.002
	Sum of Squares and Cross-products	183.542	30.010
	Covariance	.598	.098
	N	308	308
Average Extrinsic motivation	Pearson Correlation	.174**	1
	Sig. (2-tailed)	.002	
	Sum of Squares and Cross-products	30.010	162.870
	Covariance	.098	.531
	N	308	308

**. Correlation is significant at the 0.01 level (2-tailed).

Table 4-15 above provides a matrix of the correlation coefficients for age and extrinsic motivation. The table indicates a weak but positive relationship between age and extrinsic motivation with a Pearson correlation coefficient of r=.174: p< .0.01. The significance value tells us that the probability of getting a correlation coefficient this size in a sample of 308 people if the null hypothesis were true is very close to zero. The null hypothesis that there is no association between age and sources of motivation is again rejected.

Table 4-16. Results of correlation between age and external self- motivation below.

Correlations.

		Age	Average External self-Motivation
Age	Pearson Correlation	1	.273**
	Sig. (2-tailed)		.000
	Sum of Squares and Cross-products	183.542	42.117
	Covariance	.598	.137
	N	308	308
Average External Motivation	Pearson Correlation	.273**	1
	Sig. (2-tailed)	.000	
	Sum of Squares and Cross-products	42.117	129.913
	Covariance	.137	.423
	N	308	308

**. Correlation is significant at the 0.01 level (2-tailed).

Table 4-16 above, shows the correlation coefficients for age and external self-motivation. According to this table, Age is positively related to external self-motivation with a Pearson correlation coefficient of r=.273; p< 0.01. The null hypothesis that there is no association between age and motivation is rejected.

Table 4-17**.** Results of correlation between age and internal self- motivation below.

Correlations

		Age	Average Internal self-Motivation
Age	Pearson Correlation	1	.115*
	Sig. (2-tailed)		.043
	Sum of Squares and Cross-products	183.542	12.644
	Covariance	.598	.041
	N	308	308
Average Internal Motivation	Pearson Correlation	.115*	1
	Sig. (2-tailed)	.043	
	Sum of Squares and Cross-products	12.644	65.427
	Covariance	.041	.213
	N	308	308

*. Correlation is significant at the 0.05 level (2-tailed).

From the above table 4-17 it can be observed that age is once again positively (though weak) related to internal self-motivation with a Pearson correlation coefficient of r=-.115; p< .05. The correlation is significant at the .05 level of significance. The null hypothesis that there is no association between age and internal self-motivation is therefore rejected at the .05 level of significance.

Table 4-18. Results of correlation between age and goal internalisation below.

Correlations

		Age	Average Goal Internalisation
Age	Pearson Correlation	1	.228**
	Sig. (2-tailed)		.000
	Sum of Squares and Cross-products	183.542	42.486
	Covariance	.598	.138
	N	308	308
Average Goal Internalisation	Pearson Correlation	.228**	1
	Sig. (2-tailed)	.000	
	Sum of Squares and Cross-products	42.486	189.727
	Covariance	.138	.618
	N	308	308

**. Correlation is significant at the 0.01 level (2-tailed).

Table 4-18 shows the correlation between age and goal internalisation. Age is positively related to goal internalisation with a Pearson correlation coefficient of r=.228; p<.001. The correlation is significant, thus the null hypothesis that there is no association between age and goal internalisation is rejected.

The correlation coefficients above are weak but largely positive; hence the statistical association between x (age) and y (motivation) is weak but largely positive. From the above tests on correlation between age and sources of motivation, all the tests have been significant, indicating that the null hypothesis that there is no association between age (cohort membership) and sources of motivation should be rejected.

Below is an examination of correlation between age and work values. Work values have five dimensions and the average of each of these dimensions is correlated with age and the results are below.

Table 4-19. Results of correlation between age and extrinsic work values below.

Correlations

		Age	Average Extrinsic Work Values
Age	Pearson Correlation	1	.216**
	Sig. (2-tailed)		.000
	Sum of Squares and Cross-products	183.542	28.690
	Covariance	.598	.093
	N	308	308
Aver Extrinsic Work Values	Pearson Correlation	.216**	1
	Sig. (2-tailed)	.000	
	Sum of Squares and Cross-products	28.690	96.048
	Covariance	.093	.313
	N	308	308

**. Correlation is significant at the 0.01 level (2-tailed).

From table 4-19 above it can be observed that age is positively related to extrinsic work values with a Pearson correlation coefficient of r =.216; p<.001. The correlation is significant at the .01 level of significance. The null hypothesis that there is no association between age and work values is rejected.

Table 4-20. Results of correlation between age and intrinsic work values below.

Correlations

		Age	Average Intrinsic Work Values
Age	Pearson Correlation	1	-.102
	Sig. (2-tailed)		.073
	Sum of Squares and Cross-products	183.542	-9.632
	Covariance	.598	-.031
	N	308	308
Average Intrinsic Work Values	Pearson Correlation	-.102	1
	Sig. (2-tailed)	.073	
	Sum of Squares and Cross-products	-9.632	48.216
	Covariance	-.031	.157
	N	308	308

Table 4-20 above shows that age is negatively related to intrinsic work values with a Pearson correlation coefficient of r=-.102 and the significance value is .073. The correlation is not significant; therefore the null hypothesis that there is no association between age and intrinsic work values cannot be rejected.

Table 4-21. Results of correlation between age and altruistic work value below.

Correlations

		Age	Average Altruistic Work Values
Age	Pearson Correlation	1	.286**
	Sig. (2-tailed)		.000
	Sum of Squares and Cross-products	183.542	40.496
	Covariance	.598	.132
	N	308	308
Average Altruistic Work Values	Pearson Correlation	.286**	1
	Sig. (2-tailed)	.000	
	Sum of Squares and Cross-products	40.496	109.035
	Covariance	.132	.355
	N	308	308

**. Correlation is significant at the 0.01 level (2-tailed).

Table 4-21 above indicates that age is positively related to altruistic work values with a Pearson correlation coefficient of r=.286; p<.001. The correlation is significant at the .01 level of significance; therefore the hypothesis that there is no association between age and altruistic work values is rejected.

Table 4-22. Results of correlation between age and prestige work values below.

Correlations

		Age	Average Prestige Work values
Age	Pearson Correlation	1	.291**
	Sig. (2-tailed)		.000
	Sum of Squares and Cross-products	183.542	37.970
	Covariance	.598	.124
	N	308	308
Average Prestige Work Values	Pearson Correlation	.291**	1
	Sig. (2-tailed)	.000	
	Sum of Squares and Cross-products	37.970	92.808
	Covariance	.124	.302
	N	308	308

**. Correlation is significant at the 0.01 level (2-tailed).

From table 4-22 above it can be observed that age is positively related to prestige work values with a Pearson correlation coefficient of r=.291; p<.001. The null hypothesis that there is no association between age and prestige work values is rejected at the .01 level of significance.

Table 4-23. Results of correlation between age and social work values below.

Correlations

		Age	Average Social Values
Age	Pearson Correlation	1	-.264**
	Sig. (2-tailed)		.000
	Sum of Squares and Cross-products	183.542	-44.989
	Covariance	.598	-.147
	N	308	308
Average Social Values	Pearson Correlation	-.264**	1
	Sig. (2-tailed)	.000	
	Sum of Squares and Cross-products	-44.989	158.301
	Covariance	-.147	.516
	N	308	308

**. Correlation is significant at the 0.01 level (2-tailed).

Table 4-23 above indicates that age is negatively related to social values with a Pearson correlation coefficient of r=.-264; p<.001. The correlation is significant, therefore the null hypothesis that there is no association between age and social work values is rejected.

From the above tests on correlation between age and work values, the second hypothesis that there is no association between cohort membership and work values is rejected. However, one dimension of work values suggested no association between cohort membership (as represented by age) and work values. There was no association between intrinsic work values and age. The other four dimensions all indicated that there is an association between age (cohort membership) and work values. Based on four out of five dimensions, the null hypothesis that there is no association between age and work values is thus rejected.

Table 4-24. Results of correlation between age and affective commitment below.

Correlations

		Age	Average affective Commitment
Age	Pearson Correlation	1	.383**
	Sig. (2-tailed)		.000
	Sum of Squares and Cross-products	183.542	76.961
	Covariance	.598	.251
	N	308	308
Average affective Commitment	Pearson Correlation	.383**	1
	Sig. (2-tailed)	.000	
	Sum of Squares and Cross-products	76.961	220.139
	Covariance	.251	.717
	N	308	308

**. Correlation is significant at the 0.01 level (2-tailed).

From table 4-24 above it can be observed that there is a moderate but positive relationship between age and affective commitment with a Pearson correlation coefficient of r=.383; p<.001. The significance value tells us that we can gain confidence that there is a genuine association between age and affective commitment. The null hypothesis that there is no association between age (cohort membership) and affective organisational commitment is rejected.

Table 4-25. Results of correlation between age and continuance commitment below.

Correlations

		Age	Average Continuance Commitment
Age	Pearson Correlation	1	.351**
	Sig. (2-tailed)		.000
	Sum of Squares and Cross-products	183.542	68.971
	Covariance	.598	.225
	N	308	308
Average Continuance Commitment	Pearson Correlation	.351**	1
	Sig. (2-tailed)	.000	
	Sum of Squares and Cross-products	68.971	210.719
	Covariance	.225	.686
	N	308	308

**. Correlation is significant at the 0.01 level (2-tailed).

Table 4-25 shows that age is positively related to continuance commitment with a Pearson correlation coefficient of r=.351; p<.001. The correlation is significant and the null hypothesis that there is no association between age continuance commitments is rejected.

Table 4-26. Results of correlation between age and normative commitment below.

correlations

		Age	Average Normative Commitment
Age	Pearson Correlation	1	.291**
	Sig. (2-tailed)		.000
	Sum of Squares and Cross-products	183.542	47.462
	Covariance	.598	.155
	N	308	308
Average normative commitment	Pearson Correlation	.291**	1
	Sig. (2-tailed)	.000	
	Sum of Squares and Cross-products	47.462	144.679
	Covariance	.155	.471
	N	308	308

**. Correlation is significant at the 0.01 level (2-tailed).

Table 4-26 indicates that age is positively related to normative commitment with a Pearson correlation coefficient of r=.291; p<.001. The correlation is significant and the null hypothesis that there is no association between age and normative commitment is rejected.

The correlation test on age and the three dimensions of commitment yielded moderate and positive relationships between age and commitment. The third hypothesis that there is no association between age (cohort membership) and organisational commitment is therefore rejected.

Table 4-27. Results of correlation between age and job satisfaction below.

Correlations

		Age	Average Job Satisfaction
Age	Pearson Correlation	1	.402**
	Sig. (2-tailed)		.000
	Sum of Squares and Cross-products	183.542	61.097
	Covariance	.598	.199
	N	308	308
Average Job Satisfaction	Pearson Correlation	.402**	1
	Sig. (2-tailed)	.000	
	Sum of Squares and Cross-products	61.097	126.157
	Covariance	.199	.411
	N	308	308

**. Correlation is significant at the 0.01 level (2-tailed).

Table 4-27 shows that age is positively related to job satisfaction with a Pearson correlation coefficient of r=.402; p< .001. The correlation is significant and the forth hypothesis that there is no association between age and job satisfaction is rejected.

4.2.6 SUMMARY

The parametric test carried out show largely positive and significant correlations between age (cohort membership) and the four variables under study. There appears to be an association between age and sources of motivation, work values, organisational commitment and job satisfaction. There is however need to validate these results with non-parametric tests since the assumption of normality appears to have been violated in the data. Below are the results of non-parametric tests carried out on the data.

4.3.0 NON PARAMETRIC TESTS

4.3.1 Spearman's correlation coefficient.

This is a non-parametric statistic, and therefore can be used when the data has violated parametric assumptions such as non-normally distributed data. Spearman's test works first by ranking the data and then applying Pearson's equation to the ranks (Field, 2011, p. 179). Because our data appears not to be normal it would be appropriate to use non-parametric tests to analyse it. Below are the analysis performed using Spearman's correlation coefficient and Kendall's tau. Non parametric tests are used here to gather further evidence to check the results of the Pearson test carried out above.

4.3.2 Kendall's tau

This is another non-parametric correlation and it should be used in place of Spearman's coefficient when dealing with a small data set with large number of ranks (Field, 2011). If all scores have been ranked and many scores have the same rank, then Kendall's tau should be used (Field, 2011, p. 180). Although Spearman's statistic is the more popular, there is much to suggest that Kendall's statistic is actually a better estimate of the correlation in the population (Field, 2011, p. 180). As such, better and more accurate generalisations can be drawn from Kendall's statistic than Spearman's (Field, 2011). In this study both tests were used to validate the results from parametric tests.

Table 4-28. Results of correlation between age cohort membership) and sources of motivation (non- parametric tests) below.

Kendall's Tau		Dimensions of sources of motivation					
		Age	Intrinsic motivation	Extrinsic motivation	Internal self-motivation	External self-motivation	Goal internalisation
Age	Correlation coefficient	1.000	-.311**	-.102*	-.129**	.211**	.189**
	Sig (2 tailed)		.000	.034	.008	.000	.000
	N		308	308	308	308	308
Spearman's correlation coefficient							
Age	Correlation coefficient	1.000	-.366**	-.122*	-.149**	.249**	.225**
	Sig (2 tailed)		.000	.033	.009	.000	.000
	N		308	308	308	308	308

**. Correlation is significant at the 0.01 level (2-tailed).

Table 4-28 above shows Kendall's tau correlations between age and the five sources of motivation. The first column shows the results of correlation between age and intrinsic motivation. The two variables are negatively correlated with a coefficient value R= -.311 which is significant at the .01 level of significance. Spearman's correlation coefficient is also negative with a value R= -.366 and also significant at the .01 level of significance.

For extrinsic motivation, Kendall's tau correlation is negative with a low value R= -.102 and Spearman's correlation coefficient value is R= -.122. For both tests the results are significant at the .05 level of significance. The relationship is however negative for both tests.

The results in table 4-28 above also show a low and negative relationship between age internal self-motivation for both Kendall' tau and Spearman's correlation coefficient. Both tests however are significant at the .01 level of significance. External self-motivation has a correlation coefficient value R=.211 for age and internal self-motivation. Age is positively related to external self-motivation. Spearman's correlation coefficient is also positive a value of R= .249. The results are also both significant at the .01 level of significance.

Goal internalisation is positively related to age for both Kendall's tau and Spearman's correlation coefficient. Both tests are significant at the .01 level of significance. From the above tests on the five sources of motivation, the results suggest that we reject the null hypothesis that there is no association between cohort membership which is represented by age and sources of motivation. The results support the findings of the parametric tests carried out above.

Table 4-29. Results of correlation between age (cohort membership) and work values (non-parametric tests) below.

Kendall's Tau		Dimensions of work values					
		Age	Intrinsic work values	Extrinsic work values	Prestige work values	Altruistic work values	Social work values
Age	Correlation coefficient	1.000	-.093	.189**	.218**	.221**	-.187**
	Sig (2 tailed)		.065	.000	.000	.000	.000
	N		308	308	308	308	308
Spearman's correlation coefficient							
Age	Correlation coefficient	1.000	-.104	.224**	.251**	.255**	-.214**
	Sig (2 tailed)		.069	.000	.000	.000	.000
	N		308	308	308	308	308

**. Correlation is significant at the 0.01 level (2-tailed).

Table 4-29 above shows the results of both Kendal's Tau and Spearman's correlation coefficient between age and work values. The first column shows the results of correlation between intrinsic work values and age with correlation values of R= -.93 Kendal's tau and R= -104 Spearman's correlation coefficient. Both test are however not significant. Thus we fail to reject the null hypothesis that there is no association between age and intrinsic work values. There is a positive relationship between age and extrinsic work values for both Kendall's tau and Spearman's correlation coefficient with values of R=.189 and R= .224 respectively. The tests are both significant at the .01 level of significance. Table 4-29 also shows correlation between age and prestige work values. Both Kendall's tau and Spearman's correlation coefficient show a positive association between age and prestige work values.

As age increases prestige work values also increase. Both tests are significant at the .01 level of significance. Correlation between age and social work values, indicate a negative association between age and social work values. Both tests however are significant at the .01 level of significance.

Four out of five tests carried out on the five dimensions of work values have been significant indicating that the null hypothesis that there is no association between cohort membership (age) and work values is largely rejected. The results echo the findings of parametric test carried out above.

Table 4-30 Results of correlation between age (cohort membership) and organisational commitment below.

Kendall's Tau		Dimensions of organisational commitment			
		Age	Affective commitment	Continuance commitment	Normative commitment
Age	Correlation coefficient	1.000	.302	.266	.245
	Sig (2 tailed)		.000	.000	.000
	N		308	308	308
Spearman's correlation coefficient					
Age	Correlation coefficient	1.000	.364	.326*	.291
	Sig (2 tailed)		.000	.000	.000
	N		308	308	308

**. Correlation is significant at the 0.01 level (2-tailed).

Table 4-30 shows tests carried out to investigate the association between age (cohort membership) and organisational commitment. The first column shows correlation coefficients for both Kendall's tau and Spearman's coefficient which are positive, indicating that as age increases, affective commitment also increases. The correlation is significant at the .01 level of significance.

With regards to age and continuance commitment, Table 4-30 shows a positive relationship for both Kendall's tau and Spearman's correlation coefficient (R=.266 and R=226). Both tests are significant at the .01 level of significance.

Table 4-30, shows that there is a positive association between age and normative commitment with a correlation coefficients of R= .245 for Kendall's Tau and R= .291 for Spearman's correlation coefficient.

From the above tests on the three dimensions of organisational commitment, the null hypothesis that there is no relationship between age and organisational commitment is rejected at the .01 level of significance. The results are in keeping with the findings of the parametric tests carried out earlier.

Table 4-31 Results of correlation between age (cohort membership) and Job satisfaction below.

Kendal's Tau			
		Age	Job satisfaction
Age	Correlation coefficient	1.000	.336**
	Sig (2 tailed)		.000
	N		308
Spearman's correlation coefficient			
Age	Correlation coefficient	1.000	.408**
	Sig (2 tailed)		.000
	N		308

Table 4-24 shows the results of the non-parametric tests carried out on the association between age and job satisfaction. Both correlation coefficients are positive with values of R= .336 Kendall's tau and R= .408 Spearman's correlation coefficient. Both tests are significant at the .01 level of significance which leads to the conclusion that the null hypothesis that there is no relationship between cohort membership and job satisfaction be rejected.

4.3.3 Summary

Both parametric and non-parametric tests were carried out to investigate the relationship between cohort membership and the four variables under study (motivation, work values, organisational commitment and job satisfaction). Although parametric tests should be carried out for normal data and non-parametric tests for data that is not normal, both parametric and non-parametric tests were carried out to confirm the results of the parametric tests that were carried out initially. Both parametric and non-parametric test results suggest the rejection of hypothesis 1-4. Multivariate analysis follows below.

4.4.0 MULTI -VARIATE ANALYSIS

4.4.1 Regression analysis

Kohler (2002) states that statisticians have devised ways of making inferences from sample data concerning the true relationship between Y and X, but the validity of these inferences rests on the fulfilment of the assumptions about the true regression line. Assumption one is that every population of Y values, is normally distributed (Kohler (2002). Before carrying out regression analysis, the following assumptions should be checked. 1. Normality, 2 Homoscedasticity, 3 Non autocorrelation. Normal probability plot is used to show that data is consistent with normality and homoscedasticity. Durbin-Watson test is used to check whether there is autocorrelation between residuals. The ideal value of the Durbin-Watson is between 1.5 and 2.5 (Curwin & Slater, 2008). Kohler (2002) suggests that testing for normality may involve inspection of the histogram which should look symmetrical and bell-shaped rather than lopsided.

The study used regression analysis to test hypothesis 1- 8. Regression analysis examines the relationship between dependent variables to specified independent variables. Regression analysis is used to examine the relationship between dependent and independent variables. It is a way of predicting an outcome variable from one predictor variable (simple regression) or several predictor variables (multiple regression) (Field, 2011, p. 198). This is done by fitting a statistical model to the data in the form of a straight line and this line is the line that best summarises the pattern of the data (Field, 2011, p. 199).

The researcher has to assess how well the line fits the data using the following (Field 2011, p. 201)

- R^2 tells how much variance is explained by the model compared to how much variance there is to explain. It is the proportion of variance in the outcome variable that is shared by the predictor variable.
- F tells how much variability the model explains relative to how much it cannot explain (i.e. it is a ratio of how good the model is compared to how bad it is).

The b- value explains the gradient of the regression line and the strength of the relationship between a predictor and the outcome variable (Curwin & Slater, 2008).
If it is significant (sig <.05), then the predictor variable significantly predicts the outcome variable. In multiple linear regression, the outcome variable Y is predicted using the equation of a straight line.

$$Y_i = (b_0 + b_1 X_{Ii} + b_2 X_{2i} + \ldots + b_n X_{ni}) + \varepsilon_i$$

Below are assumptions of regression analysis adapted from (Field, 2011, p. 220);

- Variable types: all predictor variables must be quantitative or categorical and the outcome variable must be quantitative, continuous and unbounded.
- Non-zero variance; the predictors should have some variation in value.
- No perfect multicollinearity: there should be no perfect linear relationship between two or more of the predictors.
- Predictors are uncorrelated with external variables.
- Homoscedasticity: at each level of the predictor variables, the variance of the residual terms should be constant.
- Normally distributed errors: it is assumed that the residuals in the model are random, normally distributed variables with a mean of zero.
- Independence: it is assumed that all the values of the outcome variable are independent.
- Linearity: the mean value of the outcome variable for each increment of the predictor(s) lie along a straight line i.e. the relationship is a linear one.

4.4.2 Multicollinearity

Muticollinearity refers to the interrelatedness of the variables on the right hand side of the equation, the independent variables (Curwin & Slater 2008. p, 419). In this study intuitively one would think that age, tenure, and education are all possibly problematic because of multicollinearity. Field (2011. p, 223) states that if there is perfect collinearity between predictors, it becomes impossible to obtain unique estimates of the regression coefficients because there are an infinite number of combinations of coefficients that would work equally well.

Field (2011) suggests scanning a correlation matrix of predictors to see if any correlate very highly (correlations of above .80. or .90.). This method might however, miss some forms of multicollinearity and using the Variance Inflation Factor (VIF) would assist (Kohler, 2002).

The VIF indicates whether a predictor has a strong linear relationship with the other predictor(s) (Field 2011). Myers (1990) suggests that a VIF value of 10 should raise a concern. Another method to detect multicollinearity is to use Tolerance, and values of below 0.1 indicate serious problems (Field 2011. p, 224). An examination of the above statistics in the regression models carried out in this study (VIF and Tolerance) shows values far below the value of 10 for VIF and 0.1 for tolerance for the six predictors; age, tenure, education, gender, health, and race. These results indicate that the models do not have problems of multicollinearity. The coefficients of the regression models which show VIF and Tolerance are shown in Appendix F.

4.4.3 MULTIPLE LINEAR REGRESSION

4.4.4 HYPOTHEISI 1: cohort membership and sources of motivation

To further test the hypotheses, multiple linear regression was carried out. Hypothesis one predicted no association between cohort membership and sources of motivation. Sources of motivation were measured using five dimensions: Intrinsic motivation, extrinsic motivation, internal self-motivation, external self-motivation and goal internalisation. First to be tested was the relationship between age and intrinsic motivation.

The following multiple regression was obtained using SPSS Version 20 software for the analysis of sources of motivation as the dependent variable, the results of which are illustrated below. The SPSS output in appendix F provides some important information about the models produced by the regression analysis: the values of R, R^2 and the adjusted R^2. The row labelled R shows the values of the multiple correlation coefficients between the predictors and the outcome and in this case the predictors are: age, tenure, education, gender, race and health and the outcome variable is intrinsic motivation (Field 2011).

The adjusted R^2 gives some idea of how well, the model generalises and ideally, the value should be very close to R^2 (Field 2011). The change statistics indicate whether the change in R^2 is significant, and this significance is shown in the significance F change. The Durbin-Watson statistic indicates whether the assumptions of independent errors are tenable (Field 2011). As a conservative rule, values less than 1 or greater than 3 should raise a concern (Field 2011, p. 235).

Curwin and Slater (2008) state that the Durbin-Watson can only take values between 0 and 4, with an ideal value being 2 indicating the absence of autocorrelation. The closer to 2 the value is the better.

Table 4-32 Results of hierarchical multiple linear regression with sources of motivation as the dependent variable below. ; Age, education, tenure, gender, race and health as independent values.

Variable Step 1	Dimensions of sources of motivation				
	Intrinsic motivation coefficient	Extrinsic motivation coefficient	Internal self-motivation coefficient	External self-motivation coefficient	Goal internalization coefficient
Gender	.034	.154	.040	.134	-.122
Health	-.036	.080	-.054	-.049	.015
Education	.008	.015	.045	.019	.049
Race	-.089	-.076	.000	.058	.073
Tenure	-.202***	-.077	.030	.088*	.136**
R	.320	.127	.177	.193	.238
R^2	.103	.016	.031	.037	.057
F-Value	6.901***	.985	1.944	2.330**	3.635***
D-W Value	1.732	1.888	1.503	1.592	1.477
Step2					
Gender	.050	.159	.035	.118	-.133
Health	.024	.097	-.071	-.112	-.024
Education	.016	.018	.043	.011	.044
Race	-.100	-.079	.003	.069	.079
Tenure	-.087	-.045	-.003	-.030	.062
Age	-.267***	-.074	.077	.275***	.173*
R	.393	.135	.203	.317	.272
R^2	.154	.018	.041	.100	.074
F-Value	9.137***	.929	2.151*	5.594***	4.003**
D-W Value	1.718	1.896	1.522	1.632	1.490

Note. Statistical significance: *p<.05;**p<.01;***p<.001

Hierarchical multiple linear regression was performed to investigate the ability of age (cohort membership) to predict sources of motivation after controlling for demographic factors such as gender, health, education, race and tenure.

VIF values and tolerance were examined to check whether multicollinearity was likely to be a problem and all the values were within tolerance range as per Field (2011).

Pearson correlation indicated earlier that all variables were statistically correlated with age (except for intrinsic work values). In the first step of hierarchical regression, five predictors were entered: gender, health, race, education and tenure. This model was statistically significant (R =.320; p< .001.) R^2 = .103 indicating that the model explained 10% of the variance in intrinsic motivation. After entry of age (cohort membership) the total variance explained by the model as a whole was .154 indicating that the model as a whole explained 15% of variance in intrinsic motivation (F= 9.137; p < .001). The introduction of age explained additionally 5% of variance in intrinsic motivation after controlling for gender, health, education, race and tenure. In the final model age is the only statistically significant variable recording the highest Beta value (B=-.267, p<.001). The negative Beta value suggests a negative association between intrinsic motivation and age.

The same process was performed for all the other dimensions of sources of motivation; extrinsic motivation, internal self-motion, external self-motivation and goal internalisation. The introduction of age in the final model for extrinsic motivation and internal self-motivation does not improve the models much since it explains less than 1% of variation in the two dimensions of motivation. The introduction of age in external self-motivation improves the final model and the variance explained by age improves from 4% to 10% which means age explains additionally 6% of variance in external self-motivation. The introduction of age in goal internalisation results in a 1% rise in the variation explained by age in goal internalisation motivation. Three out five predictor variables had significant contributions to the dependent variable. Multiple linear regression analysis performed on the five dimensions of sources of motivation indicated that the null hypothesis that there is no association between age (cohort membership) should be largely rejected.

4.4.5. HYPOTHESIS 2: COHORT MEMBERSHIP AND WORK VALUES

Hypothesis two predicted no association between cohort membership and work values. Work values were measured using five dimensions: Intrinsic work values, extrinsic work values, prestige work values, altruistic work values and social work values.

Cohort membership, as already stated elsewhere was measured using three age groups that represent the generations under study. First to be tested was the relationship between age and intrinsic work values.

Table 4-33 Results of hierarchical multiple linear regression with work values as the dependent variable; Age, education, tenure, gender, race and health as independent values.

	Dimensions of work values				
	Intrinsic work values	Extrinsic work values	Prestige work values	Altruistic work values	Social work values
Gender	.010	-.038	.024	.036	-.084
Health	.069	.070	.000	-.046	.120
Education	-.057	-.054	-.059	-.066	-.022
Race	.005	-.069	-.055	-.033	-.167
Tenure	.076*	-.045	-.184***	-.135***	.236***
R	.206[a]	.167[a]	.373[a]	.284[a]	.329
R^2	.042	.028	.139	.081	.108
F-Value	2.666	1.735	9.749	5.300	7.346
D-W Value	1.794	2.200	1.827	1.646	1.912
Step2					
Gender	.004	-.027	.031	.048	-.096
Health	.047	.111	.028	.000	.075
Education	-.060	-.049	-.055	-.060	-.028
Race	.009	-.077	-.059	-.041	-.160
Tenure	.033	.035	-.131*	-.050**	.152**
Age	.098	-.184**	-.124*	-.200**	.195**
R	.233*	.239*	.393***	.336***	.359***
R^2	.054	.057	.154	.113	.129
F-Value	2.875*	3.041	9.152	6.400	7.403
D-W Value	1.804	2.245	1.778	1.626	1.916

Note. Statistical significance: *p<.05;**p<.01;***p<.001

In the first step of hierarchical regression, five predictors were entered: gender, health, race, education and tenure. This model was statistically significant (R =.206; p< .001.) R^2 = .042 indicating that the model explained 4% of the variance in intrinsic work values.

After entry of age (cohort membership) the total variance explained by the model as a whole was .054 indicating that the model as a whole explained 5% of variance in intrinsic work values (F= 2.875; p < .05).

The introduction of age explained additionally 1% of variance in intrinsic work values after controlling for gender, health, education, race and tenure. In the final model none of the variables are statistically significant.

The null hypothesis that there is no association between cohort membership and intrinsic work values cannot be rejected. Extrinsic work values were regressed against age after controlling for gender, health, race, education and tenure. There was a slight improvement in the final model with age explaining additional 3% of variation in extrinsic work values. The highest Beta value is also from age (B=-.184; p<.05.

For prestige work values, age additionally explained 1% variation in prestige work values. The final model is significant at the .05 level of significance indicating that the null hypothesis that there is no association between cohort membership and prestige work values be rejected. Age also contributes towards altruistic and social work values by an additional 3% variation in altruistic work values and 2% for social work values. The null hypothesis that there is no association between work values is rejected four out of five times for the five dimensions of work values. The above results echo Pearson's correlation test that indicated that the null hypothesis that there that there is no association between cohort membership and work values be rejected four out of the five dimensions of work values. Intrinsic work values are the exception in both tests.

4.4.6 HYPOTHESIS 3: COHORT MEMBERSHIP AND ORGANISATIONAL COMMITMENT

Hypothesis three predicted no association between cohort membership and organisational commitment. Organisational commitment was measured using three dimensions: affective commitment, continuance commitment and normative commitment. Age represented cohort membership. First to be tested was the relationship between age and affective commitment.

Table 4-34: Results of hierarchical multiple linear regression with organisational commitment as the dependent variable; Age, education, tenure, gender, race and health as independent values.

	Dimensions of Organisational commitment		
	Affective	Continuance	Normative
Gender	-.146	-.015	.066
Health	-.014	-.110	-.108
Education	.006	.046	.013
Race	-.063	.030	.055
Tenure	-.343***	-.316***	-.254***
R	.393	.370	.363
R^2	.155	.137	.132
F-Value	11.052***	9.593***	9.163***
D-W Value	1.923	1.801	1.732
Step 2			
Gender	-.126	.003	.075
Health	.065	-.039	-.074
Education	.016	.055	.017
Race	-.077	.017	.050
Tenure	-.195**	-.182**	-.191***
Age	-.344***	-.311***	-.146*
R	.453	.424	.381
R^2	.205	.180	.145
F-Value	12.921***	11.021***	8.494**
D-W Value	2.021	1.850	1.758

Note. Statistical significance: *p<.05;**p<.01;***p<.001

In the first step of hierarchical regression, five predictors were entered: gender, health, race, education and tenure. This model was statistically significant (R =.393; p< .001.) R^2 = .155 indicating that the model explained 16% of the variance in affective commitment. After entry of age (cohort membership) the total variance explained by the model as a whole was .205 indicating that the model as a whole explained 21% of variance in affective commitment (F= 12.921; p < .001). The introduction of age explained additionally 5% of variance in affective commitment after controlling for gender, health, education, race and tenure. This result is also significant.

The null hypothesis that there is no association between cohort membership and affective commitment is rejected.

The second dimension for organisational commitment (continuance) was regressed against age after controlling for gender, health, education race and tenure and the contribution of age towards continuance commitment was R^2=.180 up from .137 in the first step which indicates that age contributed an additional 4% towards continuance commitment. Normative commitment was also regressed against the independent variable. In the first step of regression, the results indicated that the model explained .132 (13%) of variation in normative commitment. In the second step the results indicated that the model explained .145 (15%) of variation in normative commitment which indicated that age contributed an additional 2% variation in normative commitment. All the three final models were significant, therefore the null hypothesis that there is no association between age and cohort membership be rejected.

4.4.7 HYPOTHESIS 4 COHORT MEMBERSHIP AND JOB SATISFACTION

Hypothesis four predicted no association between cohort membership and job satisfaction. Multiple regression analysis was used to test the association between the dependent variable job satisfaction and the independent variables age (cohort membership) tenure, education, gender, race and health. The results are below.

Table 4-35 Results of hierarchical multiple linear regression with job satisfaction as the dependent variable; Age, education, tenure, gender, race and health as independent values.

Variable Step1	Job satisfaction
Gender	-.048
Health	-.011
Education	.014
Race	.032
Tenure	.289***
R	.465
R^2	.216
F-Value	16.671***
D-W Value	1.931
Step 2	
Gender	-.058
Health	-.050
Education	.008
Race	.039
Tenure	.215***
Age	.172**
R	.492
R^2	.242
F-Value	16.006***
D-W Value	1.963

Note. Statistical significance: *p<.05;**p<.01;***p<.001

In the first step of hierarchical regression, five predictors were entered: gender, health, race, education and tenure. This model was statistically significant (R =.465; p< .001.) R^2 =.216 indicating that the model explained 22% of the variance in job satisfaction.

After entry of age (cohort membership) the total variance explained by the model as a whole was .242 indicating that the model as a whole explained 24% of variance in job satisfaction ($F= 16.006$; $p < .01$). The introduction of age explained additionally 2% of variance in job satisfaction after controlling for gender, health, education, race and tenure. The result is significant and the null hypothesis that there is no association between cohort membership and job satisfaction is thus rejected.

Multiple linear regression was carried out to further investigate the association between sources of motivation, work values, organisational commitment and job satisfaction. The results echo and validate the correlation tests carried out earlier. The final conclusion arrived at after the two tests is that the null hypotheses that predicted no association between cohort membership and the four variables be rejected. There is an association between cohort membership and sources of motivation, work values, organisational commitment and job satisfaction.

4.4.8 HYPOTHESIS 5: MOTIVATION AND ORGANISATIONAL COMMITMENT

Hypothesis five predicted no association between sources of motivation and organisational commitment. First to be tested was the relationship between sources of motivation and affective commitment. The results are below.

Table 4-36 Results of hierarchical multiple linear regression; with organisational commitment as the dependent variable; intrinsic motivation as independent variables.

	Dimensions of Organisational commitment		
	Affective	Continuance	Normative
Gender	-.126	..003	.075
Age	-.344	-.311	-.146
Health	.065	-.039	-.074
Education	.016	.055	.017
Race	-.077	.017	.050
Tenure	-.195	-.182	-.191
R	.453	.424	.381
R^2	.205	.180	.145
F-Value	12.921***	11.021***	8.494***
D-W Value	2.021	1.850	1.758
Step 2			
Gender	-.126	-.001	.067
Age	-.343	-.286	-.102
Health	.065	-.041	-.078
Education	.016	.054	.014
Race	-.076	.027	.066
Tenure	-.195	-.174	-.176
Intrinsic motivation	.005	.093	.164**
R	.453	.430	.405
R^2	.205	.185	.164
F-Value	11.040***	9.706***	8.416***
D-W Value	2.021	1.847	1.737

Note. Statistical significance: *p<.05;**p<.01;***p<.001

In order to investigate the relationship between sources of motivation and organisational commitment hierarchical regression was performed. In the first step of hierarchical regression, six predictors were entered: gender, health, race, education age and tenure. The model is statistically significant (R =.453; p< .001.) R^2 = .205 indicating that the model explains 21% of the variance in affective commitment. After entry of intrinsic motivation the total variance explained by the model as a whole remained the same (R=453: p<.001). R^2=.205meaning that intrinsic motivation did not contribute anything over and above the covariates entered initially. For continuance commitment, intrinsic motivation explains 1% of variation. Intrinsic motivation also explains 1% of variation in normative commitment. The null hypothesis that there is no association between intrinsic motivation and organisational commitment is rejected since the correlation is significant. All the Durbin-Watson values are close to 2 indicating that autocorrelation is not a problem in the model.

Table 4-37 Results of hierarchical multiple linear regression; with organisational commitment as the dependent variable; extrinsic motivation as independent variables

	Dimensions of Organisational commitment		
	Affective	Continuance	Normative
Gender	-.126	..003	.075
Age	-.344	-.311	-.146
Health	.065	-.039	-.074
Education	.016	.055	.017
Race	-.077	.017	.050
Tenure	-.195	-.182	-.191
R	.453	.424	.381[a]
R^2	.205	.180	.145
F-Value	12.921***	11.021***	8.494***
D-W Value	2.021	1.850	1.758
Step 2			
Gender	-.133	-.003	.062
Age	-.340	-.308	-.140
Health	.060	-.043	-.082
Education	.015	.055	.015
Race	-.073	.021	.056
Tenure	-.193	-.180	-.187
Extrinsic motivation	.049	.042	.082
R	.455	.427	.394
R^2	.207	.182	..155
F-Value	11.217***	9.545***	7.875***
D-W Value	2.026	1.853	1.770

Note. Statistical significance: *p<.05;**p<.01;***p<.001

Table 4-37 above shows results of hierarchical multiple linear regression investigating the relationship between extrinsic motivation and organisational commitment. In the first step of hierarchical regression, six predictors were entered: gender, health, race, education age and tenure. This model is statistically significant (R =.453; p< .001.) R^2 = .205 indicating that the model explains 21% of the variance in affective commitment. After entry of extrinsic motivation the total variance explained by the model as a whole is R^2=207 indicating that extrinsic motivation explains less than 1% of variation in affective commitment. The contribution of extrinsic motivation in explaining the variation in continuance commitment is less than 1% and 1% for normative commitment. The null hypothesis that there is no association between extrinsic motivation and organisation commitment may not be rejected because the correlation is not significant. The Durbin-Watson values are all close to 2 suggesting that autocorrelation is not a problem in the model.

Table 4-38 Results of hierarchical multiple linear regression; with organisational commitment as the dependent variable; external-self motivation as independent variables.

	Dimensions of Organisational commitment		
	Affective	Continuance	Normative
Gender	-.126	..003	.075
Age	-.344	-.311	-.146
Health	.065	-.039	-.074
Education	.016	.055	.017
Race	-.077	.017	.050
Tenure	-.195	-.182	-.191
R	.453	.424	.381
R^2	.205	.180	.145
F-Value	12.921***	11.021***	8.494***
D-W Value	2.021	1.850	1.758
Step 2			
Gender	-.106	.009	.088
Age	-.299	-.299	-.115
Health	.047	-.044	-.087
Education	.018	.056	.018
Race	-.066	.020	.057
Tenure	-.200	-.184	-.194
External self- motivation	-.164*	-.044	-.112
R	.466	.426	. .391[a]
R^2	.217	.181	.153
F-Value	11.880***	9.475***	7.746***
D-W Value	2.009	1.848	1.777

Note. Statistical significance: *p<.05;**p<.01;***p<.001

Table 4-38 above shows results of hierarchical multiple linear regression investigating the relationship between external self-motivation and organisational commitment. In the first step of hierarchical regression, six predictors were entered: gender, health, race, education age and tenure. This model was statistically significant (R =.453; p< .001.) R^2 = .205 indicating that the model explains 21% of the variance in affective commitment. After entry of external self-motivation, the total variance explained by the model as a whole is R^2=217 indicating that external self-motivation explains 2% over and above the covariates entered initially. The contribution of external self-motivation in explaining the variation in continuance commitment is 1% which is not significant and less than 1% of variation in normative commitment, also not significant. The null hypothesis that there is no association between external self-motivation and organisational commitment may not be rejected. The Durbin-Watson values are close to 2 suggesting that autocorrelation is not a problem in the model.

Table 4-39 Results of hierarchical multiple linear regression; with organisational commitment as the dependent variable; internal self- motivation as independent variables.

	Dimensions of Organisational commitment		
	Affective	Continuance	Normative
Gender	-.126	..003	.075
Age	-.344	-.311	-.146
Health	.065	-.039	-.074
Education	.016	.055	.017
Race	-.077	.017	.050
Tenure	-.195	-.182	-.191
R	.453	.424	.381
R^2	.205	.180	.145
F-Value	12.921***	11.021***	8.494***
D-W Value	2.021	1.850	1.758
Step 2			
Gender	-.122	.005	.080
Age	-.337	-.308	-.135
Health	.058	-.041	-.084
Education	.020	.057	.023
Race	-.077	.017	.050
Tenure	-.196	-.182	-.191
Internal self-motivation	-.091	-.038	-.138
R	.455	.425	.389
R^2	207	.180	.152
F-Value	11.177***	9.439***	7.652***
D-W Value	2.026	1.855	1.789

Note. Statistical significance: *p<.05;**p<.01;***p<.001

Table 4-39 above shows results of hierarchical multiple linear regression investigating the relationship between internal self-motivation and organisational commitment. In the first step of hierarchical regression, the six predictors entered produced a significant (R =.453; p< .001.) R^2 = .205 indicating that the model explains 21% of the variance in affective commitment. After entry of internal self-motivation the total variance explained by the model as a whole is R^2=207 indicating that internal self-motivation explains less than 1% of variation in affective commitment over and above the covariates entered initially. There is no notable contribution of internal self-motivation in explaining the variation in continuance commitment. Internal self-motivation explains less than 1% of variation normative. The null hypothesis that there is no association between internal self-motivation and organisational commitment may not be rejected. All the Durbin-Watson values are close to 2 indicating no autocorrelation in the model.

Table 4-40 Results of hierarchical multiple linear regression; with organisational commitment as the dependent variable; goal internalisation motivation as independent variables

	Dimensions of Organisational commitment		
	Affective	Continuance	Normative
Gender	-.126	..003	.075
Age	-.344	-.311	-.146
Health	.065	-.039	-.074
Education	.016	.055	.017
Race	-.077	.017	.050
Tenure	-.195	-.182	-.191
R	.453	.424[a]	.381[a]
R^2	.205	.180	.145
F-Value	12.921***	11.021***	8.494***
D-W Value	2.021	1.850	1.758
Step 2			
Gender	-.150	-.018	.048
Age	-.313	-.284	-.111
Health	.060	-.043	-.079
Education	.024	.062	.026
Race	-.062	.030	.066
Tenure	-.184	-.172	-.178
Goal internalisation motivation	-.182**	-.160**	-.205***
R	.477	.446	.432
R^2	.228	.198	.187
F-Value	12.623***	10.614***	9.833***
D-W Value	2.032	1.875	1.760

Note. Statistical significance: *p<.05;**p<.01;***p<.001

Table 4-40 above shows results of hierarchical multiple linear regression investigating the relationship between goal internalisation motivation and organisational commitment. In the first step of hierarchical regression, the six predictors entered produced a significant (R =.453; p< .001.) R^2 = .205 indicating that the model explains 21% of the variance in affective commitment. After entry of goal internalisation motivation the total variance explained by the model as a whole is R^2=228 indicating that goal internalisation motivation explains 2% of variation in affective commitment over and above the covariates entered initially. Goal internalisation also explains 2% of variation in continuance commitment and 4% of variation in normative commitment.

The null hypothesis that there is no association between goal internalisation motivation and organisational commitment may be rejected since the correlation is significant. All the Durbin Watson values are close to 2 indicating that autocorrelation is not a problem in the model.

4.4.9 HYPOTHESIS 6: MOTIVATION AND JOB SATISFACTION.

Hypothesis eight predicted no association between sources of motivation and job satisfaction. Multiple linear regression was carried out with job satisfaction as the dependent variable and intrinsic, extrinsic, internal self-motivation, external self-motivation and goal internalisation as independent variables.

Table 4-41 Results of hierarchical multiple linear regression; with job satisfaction as the dependent variable; intrinsic motivation as independent variables.

Variable Step1	Job satisfaction
Gender	-.058
Age	.172***
Health	-.050
Education	.008
Race	.039
Tenure	.215***
R	.492
R^2	.242
F-Value	16.006***
D-W Value	1.963
Step 2	
Gender	-.061
Age	.189
Health	-.052
Education	.008
Race	.045
Tenure	.220
Intrinsic motivation	.060
R	.496
R^2	.246
F-Value	13.948***
D-W Value	1.979

Note. Statistical significance: *p<.05;**p<.01;***p<.001

The relationship between sources of motivation and job satisfaction was investigated using hierarchical linear regression. In the first step of hierarchical regression, six predictors were entered: gender, health, race, education age and tenure. This model is statistically significant (R =.492; p< .001.) R^2 = .242 indicating that the model explains 24% of the variance in job satisfaction.

After entry of intrinsic motivation, the total variance explained by the model as a whole increases slightly from, (R=492; p<.001) to (R=496; p<.001) R^2 =.246 meaning that intrinsic motivation explains 1% of variation in job satisfaction. The correlation is however not significant and the null hypothesis that there is no association between intrinsic motivation and job satisfaction may not be rejected. The Durbin-Watson value 1.979 is very close to 2 indicating that autocorrelation is not a problem in the model.

Table 4-42 Results of hierarchical multiple linear regression; with job satisfaction as the dependent variable; extrinsic motivation as independent variables.

Variable Step1	Job satisfaction
Gender	-.058
Age	.172
Health	-.050
Education	.008
Race	.039
Tenure	.215
R	.492[a]
R^2	.242
F-Value	16.006***
D-W Value	1.963
Step 2	
Gender	-.052
Age	.170
Health	-.047
Education	.009
Race	.036
Tenure	.214
Extrinsic motivation	-.034
R	.494[a]
R^2	.244
F-Value	13.868***
D-W Value	1.981

Note. Statistical significance: *p<.05;**p<.01;***p<.001

In the first step of hierarchical regression, six predictors were entered: gender, health, race, education age and tenure. This model is statistically significant (R =.492; p< .001.) R^2 = .242 indicating that the model explains 24% of the variance in job satisfaction.

After entry of extrinsic motivation, the total variance explained by the model as a whole increases slightly from, (R=492; p<.001) to (R=494; p<.001) R^2 =.244 meaning that extrinsic motivation explains less than 1% of variation in job satisfaction. The result is not significant. The Durbin-Watson value 1.981 is very close to 2 indicating that autocorrelation is not a problem in the model.

Table 4-43 Results of hierarchical multiple linear regression; with job satisfaction as the dependent variable; internal self-motivation motivation as independent variables.

Variable Step1	Job satisfaction
Gender	-.058
Age	.172
Health	-.050
Education	.008
Race	.039
Tenure	.215
R	.492[a]
R^2	.242
F-Value	16.006***
D-W Value	1.963
Step 2	
Gender	-.063
Age	.159
Health	-.045
Education	.008
Race	.035
Tenure	.216
Internal self-motivation	.047
R	.494[a]
R^2	.244
F-Value	13.828***
D-W Value	1.953

Note. Statistical significance: *p<.05;**p<.01;***p<.001

The first model is statistically significant (R =.492; p< .001.) R^2 = .242 indicating that the model explains 24% of the variance in job satisfaction. After entry of internal self-motivation, the total variance explained by the model as a whole increases slightly from, (R=492; p<.001) to (R=494; p<.001) R^2 =.244 meaning that internal self-motivation explains less than 1% of variation in job satisfaction. The result is not significant therefore the null hypothesis that there is no association between internal self-motivation and organisational commitment may not be rejected. The Durbin-Watson value 1.953 is very close to 2 indicating that autocorrelation is not a problem in the model.

Table 4-44 Results of hierarchical multiple linear regression; with job satisfaction as the dependent variable; external self- motivation as independent variables.

Variable Step1	Job satisfaction
Gender	-.058
Age	.172
Health	-.050
Education	.008
Race	.039
Tenure	.215
R	.492[a]
R^2	.242
F-Value	16.006***
D-W Value	1.963
Step 2	
Gender	-.062
Age	.164
Health	-.043
Education	.004
Race	.038
Tenure	.215
External self- motivation	.110
R	.498
R^2	.248
F-Value	14.125***
D-W Value	1.965

Note. Statistical significance: *p<.05;**p<.01;***p<.001

Table 3-44 above shows results of hierarchical linear regression investigating the relationship between external self-motivation and job satisfaction. After entry of external self-motivation, the total variance explained by the model as a whole is R^2=248, indicating that external self-motivation explains 1% of variation in job satisfaction over and above the covariates entered initially. However, the result is not significant. The null hypothesis that there is no association between external self-motivation and organisational commitment may not be rejected. The Durbin Watson value 1.965 is very close to 2 indicating that autocorrelation is not a problem in the model.

Table 4-45 Results of hierarchical multiple linear regression; with job satisfaction as the dependent variable; goal internalisation motivation as independent variables.

Variable Step1	Job satisfaction
Gender	-.058
Age	.172
Health	-.050
Education	.008
Race	.039
Tenure	.215
R	.492
R^2	.242
F-Value	16.006***
D-W Value	1.963
Step 2	
Gender	-.039
Age	.148
Health	-.047
Education	.002
Race	.028
Tenure	.206
Goal internalisation	.139***
R	.518[a]
R^2	.269
F-Value	15.739***
D-W Value	2.045

Note. Statistical significance: *p<.05;**p<.01;***p<.001

Table 4-45 above shows results of multiple linear regression investigating the relationship between goal internalisation and job satisfaction. After entry of goal internalisation motivation, the total variance explained by the model as a whole is R^2=269 indicating that goal internalisation explains 3% of variation in job satisfaction over and above the covariates entered initially.

The contribution of goal internalisation on job satisfaction is significant; therefore the null hypothesis that there is no association between goal internalisation motivation and job satisfaction is rejected. The Durbin Watson value of 2.045 is slightly above 2, indicating that autocorrelation is not a problem in the model. Only goal internalisation as a source of motivation was significant as a predictor of job satisfaction suggesting that the null hypothesis that there is no association between sources of motivation and job satisfaction may largely not be rejected.

4.4.10 HYPOTHESIS 7: WORK VALUES AND ORGANISATIONAL COMMITMENT

Hypothesis seven predicted no relationship between work values and organisational commitment. Multiple linear regression was carried out with the three dimensions of organisational commitment as the dependent variable and intrinsic, extrinsic, altruistic, prestige and social work values as independent variables.

Table 4-46 Results of hierarchical multiple linear regression; with organisational commitment as the dependent variable; extrinsic values as independent variables.

	Dimensions of Organisational commitment		
	Affective	Continuance	Normative
Gender	-.126	.003	.075
Age	-.344	-.311	-.146
Health	.065	-.039	-.074
Education	.016	.055	.017
Race	-.077	.017	.050
Tenure	-.195	-.182	-.191
R	.453	.424	.381
R^2	.205	.180	.145
F-Value	12.921***	11.021***	8.494***
D-W Value	2.021	1.850	1.758
Step 2			
Gender	-.124	.001	.076
Age	-.331	-.325	-.139
Health	.057	-.031	-.079
Education	.020	.052	.019
Race	-.071	.012	.053
Tenure	-.198	-.180	-.192
Extrinsic Work Values	.073	-.072	.038
R	.455	.427	.382
R^2	.207	.183	.146
F-Value	11.205***	9.575***	7.314***
D-W Value	2.014	1.853	1.765

Note. Statistical significance: *p<.05;**p<.01;***p<.001

In order to investigate the relationship between work values and organisational commitment hierarchical regression was performed. In the first step of hierarchical regression, six predictors were entered: gender, health, race, education age and tenure. This model was statistically significant (R =.453; p< .001.) R^2 = .205 indicating that the model explains 21% of the variance in affective commitment.

After entry of extrinsic work values, the total variance explained by the model as a whole increased slightly, (R=455: p<.001), R^2=.207 meaning that extrinsic work values explains less than 1% of variation in affective commitment. Extrinsic work values explain less than 1% of variation in continuance commitment and normative commitment. The correlation of the predictor variable with the dependent variables is however not significant; therefore the hypothesis that there is no association between extrinsic work values and organisational commitment may not be rejected. All the Durbin-Watson values are close to 2 indicating that autocorrelation is not a problem in the model.

Table 4-47 Results of hierarchical multiple linear regression; with organisational commitment as the dependent variable; intrinsic values as independent variables.

	Dimensions of Organisational commitment		
	Affective	Continuance	Normative
Gender	-.126	.003	.075
Age	-.344	-.311	-.146
Health	.065	-.039	-.074
Education	.016	.055	.017
Race	-.077	.017	.050
Tenure	-.195	-.182	-.191
R	.453	.424	.381
R^2	.205	.180	.145
F-Value	12.921***	11.021***	8.494***
D-W Value	2.021	1.850	1.758
Step 2			
Gender	-.125	.004	.076
Age	-.325	-.287	-.136
Health	.074	-.027	-.069
Education	.004	.040	.011
Race	-.075	.020	.051
Tenure	-.189	-.174	-.187
Intrinsic Work Values	-.197*	-.252**	-.105
R	.466[a]	.449[a]	.387[a]
R^2	.217	.202	.150
F-Value	11.899***	10.822***	7.560***
D-W Value	1.977	1.855	1.739

Note. Statistical significance: *p<.05;**p<.01;***p<.001

Table 4-47above shows results of hierarchical multiple linear regression investigating the relationship between intrinsic work values and organisational commitment. In the first step of hierarchical regression, the six predictors entered produced a significant (R =.453; p< .001.) R^2 = .205 indicating that the model explains 21% of the variance in affective commitment. After entry of intrinsic work values, the total variance explained by the model as a whole is R^2=217 indicating that intrinsic work values explain 1% of variation in affective commitment over and above the covariates entered initially. Intrinsic work values explain 2% of variation in continuance commitment and less than 1% in normative commitment. The contribution of intrinsic work values on affective commitment is significant as well as for continuance commitment but not for normative commitment.

Based on the above significance levels, the null hypothesis that there is no association between intrinsic work values and affective commitment is rejected. The null hypothesis that there is no association between intrinsic work values and continuance commitment is also rejected. However the hypothesis that there is no association between intrinsic work values and normative commitment may not be rejected. All the Durbin Watson values are close to 2 indicating that autocorrelation is not a problem in the model.

Table 4-48 Results of hierarchical multiple linear regression; with organisational commitment as the dependent variable; altruistic values as independent variables

	Dimensions of Organisational commitment		
	Affective	Continuance	Normative
Gender	-.126	.003	.075
Age	-.344	-.311	-.146
Health	.065	-.039	-.074
Education	.016	.055	.017
Race	-.077	.017	.050
Tenure	-.195	-.182	-.191
R	.453[a]	.424[a]	.381[a]
R^2	.205	.180	.145
F-Value	12.921***	11.021***	8.494***
D-W Value	2.021	1.850	1.758
Step 2			
Gender	-.133	-.005	.066
Age	-.313	-.278	-.107
Health	.065	-.039	-.074
Education	.026	.065	.029
Race	-.071	.024	.058
Tenure	-.188	-.174	-.181
Altruistic Work Values	.154*	.167*	.196**
R	.465	.440	.413
R^2	.216	.194	.171
F-Value	11.795***	10.287***	8.810***
D-W Value	2.038	1.842	1.788

Note. Statistical significance: *p<.05;**p<.01;***p<.001

Table 4-48above shows results of hierarchical multiple linear regression investigating the relationship between altruistic work values and organisational commitment.

After entry of altruistic work values the total variance explained by the model as a whole is R^2=216 indicating that altruistic work values explain 1% of variation in affective commitment over and above the covariates entered initially. Altruistic work values also explain 1% of variation in continuance commitment, and 2% variation in normative commitment. The null hypothesis that there is no association between altruistic work values and organisational commitment is rejected since all the correlations are significant at the .05 level of significance. All the Durbin Watson values are close to 2 indicating that autocorrelation is not a problem in the model.

Table 4-49 Results of hierarchical multiple linear regression; with organisational commitment as the dependent variable; prestige values as independent variables.

	Dimensions of Organisational commitment		
	Affective	Continuance	Normative
Gender	-.126	.003	.075
Age	-.344	-.311	-.146
Health	.065	-.039	-.074
Education	.016	.055	.017
Race	-.077	.017	.050
Tenure	-.195	-.182	-.191
R	.453[a]	.424[a]	.381[a]
R^2	.205	.180	.145
F-Value	12.921***	11.021***	8.494***
D-W Value	2.021	1.850	1.758
Step 2			
Gender	-.132	-.002	.070
Age	-.319	-.292	-.124
Health	.059	-.043	-.079
Education	.028	.064	.027
Race	-.065	.026	.060
Tenure	-.168	-.162	-.167
Prestige Work Values	.205*	.154	.178*
R	.469	.435	.402
R^2	.220	.189	.161
F-Value	12.081***	9.990***	8.244***
D-W Value	2.017	1.833	1.778

Note. Statistical significance: *p<.05;**p<.01;***p<.001

Table 4-49above shows results of hierarchical multiple linear regression investigating the relationship between prestige work values and organisational commitment.

After entry of prestige work values the total variance explained by the model as a whole is R^2=220 indicating that prestige work values explain 1% of variation in affective commitment over and above the covariates entered initially. Prestige work values explain 1% of variation in continuance commitment, and 2% variation in normative commitment. The predictor values are significant for affective commitment and normative commitment meaning that the null hypothesis may not be rejected for continuance commitment only. All the Durbin Watson values are close to 2 indicating that autocorrelation is not a problem in the model.

Table 4-50 Results of hierarchical multiple linear regression; with organisational commitment as the dependent variable; social values as independent variables

	Dimensions of Organisational commitment		
	Affective	Continuance	Normative
Gender	-.126	.003	.075
Age	-.344	-.311	-.146
Health	.065	-.039	-.074
Education	.016	.055	.017
Race	-.077	.017	.050
Tenure	-.195	-.182	-.191
R	.453[a]	.424[a]	.381[a]
R^2	.205	.180	.145
F-Value	12.921***	11.021***	8.494***
D-W Value	2.021	1.850	1.758
Step 2			
Gender	-.134	-.010	.068
Age	-.327	-.285	-.132
Health	.072	-.029	-.069
Education	.014	.051	.015
Race	-.091	-.004	.038
Tenure	-.182	-.162	-.180
Social work Values	-.089	-.135*	-.070
R	.459	.440	.387
R^2	.210	.193	.150
F-Value	11.413***	10.272***	7.545***
D-W Value	2.024	1.858	1.749

Note. Statistical significance: *p<.05;**p<.01;***p<.001

Table 4-50 above shows results of hierarchical multiple linear regression investigating the relationship between social work values and organisational commitment.

After entry of social work values the total variance explained by the model as a whole is R^2=210 indicating that social work values explain less than 1% of variation in affective commitment over and above the covariates entered initially. Social work values explain 1% of variation in continuance commitment, and less than 1% variation in normative commitment. The correlation is only significant for continuance commitment. All the Durbin Watson values are close to 2 indicating that autocorrelation is not a problem in the model.

Multiple linear regression carried out to investigate the association between work values and organisational commitment suggest that the null hypothesis that there is no association between work values and organisational commitment is partially supported since some of the predictors are not significant.

4.4.11 HYPOTHESIS 8: WORK VALUES AND JOB SATISFACTION

Hypothesis seven predicted no relationship between work values and job satisfaction. Multiple linear regression was used to test the relationship with the five dimensions of work values entered as independent variables and job satisfaction as the dependent variable.

Table 4-51 Results of hierarchical multiple linear regression; with job satisfaction as the dependent variable; intrinsic work values as independent variables.

Variable Step1	Job satisfaction
Gender	-.058
Age	.172***
Health	-.050
Education	.008
Race	.039
Tenure	.215***
R	.492
R^2	.242
F-Value	16.006***
D-W Value	1.963
Step 2	
Gender	-.059
Age	.168*
Health	-.048
Education	.007
Race	.037
Tenure	.216***
Extrinsic work values	-.026
R	.492
R^2	.243
F-Value	13.723***
D-W Value	1.960

Note. Statistical significance: *p<.05;**p<.01;***p<.001

In order to investigate the relationship between work values and job satisfaction hierarchical regression was performed. In the first step of hierarchical regression, six predictors were entered: gender, health, race, education age and tenure.

This model is statistically significant (R =.492; p< .001.) R^2 = .242 indicating that the model explains 24% of the variance in job satisfaction. After entry of extrinsic work values, the total variance explained by the model as a whole increases slightly, (R=492: p<.001). R^2=.243 meaning that extrinsic work values explain less than 1% of variation in job satisfaction. The result is however not statistically significant. The Durbin-Watson value is very close to 2 indicating that autocorrelation is not a problem in the model.

Table 4-52 Results of hierarchical multiple linear regression; with job satisfaction as the dependent variable; extrinsic work values as independent variables.

Variable Step1	Job satisfaction
Gender	-.058
Age	.172***
Health	-.050
Education	.008
Race	.039
Tenure	.215***
R	.492[a]
R^2	.242
F-Value	16.006***
D-W Value	1.963
Step 2	
Gender	-.058
Age	.173
Health	-.050
Education	.008
Race	.039
Tenure	.215
Intrinsic work values	-.009
R	.492
R^2	.242
F-Value	13.678***
D-W Value	1.967

Note. Statistical significance: *p<.05;**p<.01;***p<.001

The relationship between intrinsic work values and job satisfaction was investigated using hierarchical multiple linear regression.

In the first step of hierarchical regression, six predictors were entered: gender, health, race, education age and tenure. This model is statistically significant (R =.492; p< .001.) R^2 = .242 indicating that the model explains 24% of the variance in job satisfaction. After entry of intrinsic work values, the total variance explained by the model as a whole remains unchanged, (R=492: p<.001). R^2=.242 meaning that intrinsic work values do not contribute any variation in job satisfaction in this model. The Durbin-Watson value is very close to 2 indicating that autocorrelation is not a problem in the model.

Table 4-53 Results of hierarchical multiple linear regression; with job satisfaction as the dependent variable; altruistic work values as independent variables.

Variable Step1	Job satisfaction
Gender	-.058
Age	.172***
Health	-.050
Education	.008
Race	.039
Tenure	.215***
R	.492[a]
R^2	.242
F-Value	16.006***
D-W Value	1.963
Step 2	
Gender	-.049
Age	.136
Health	-.051
Education	-.002
Race	.031
Tenure	.206
Altruistic work values	-.182***
R	.522
R^2	.273
F-Value	16.084***
D-W Value	1.989

Note. Statistical significance: *p<.05;**p<.01;***p<.001

Table 4-53 above shows results of hierarchical multiple linear regression investigating the relationship between altruistic work values and job satisfaction.

After entry of altruistic work values the total variance explained by the model as a whole is R^2=273 indicating that altruistic work values explain 3% of variation in job satisfaction over and above the covariates entered initially.

This result is significant, indicating that the null hypothesis that there is no association between altruistic work values and job satisfaction be rejected. The Durbin Watson value of 1.989 is very close to 2 indicating that autocorrelation is not a problem in the model.

Table 4-54 Results of hierarchical multiple linear regression; with job satisfaction as the dependent variable; prestige work values as independent variables.

Variable Step1	Job satisfaction
Gender	-.058
Age	.172***
Health	-.050
Education	.008
Race	.039
Tenure	.215***
R	.492[a]
R^2	.242
F-Value	16.006***
D-W Value	1.963
Step 2	
Gender	-.053
Age	.152
Health	-.046
Education	-.001
Race	.029
Tenure	.193
Prestige work values	-.167**
R	.512
R^2	.262
F-Value	15.234***
D-W Value	1.983

Note. Statistical significance: *p<.05;**p<.01;***p<.001

Table 4-54above shows results of hierarchical multiple linear regression investigating the relationship between prestige work values and job satisfaction.

After entry of prestige work values, the total variance explained by the model as a whole is R^2=262 indicating that prestige work values explain 2% of variation in job satisfaction over and above the covariates entered initially.

The result is significant indicating that the null hypothesis that there is no association between prestige work values and job satisfaction be rejected. The Durbin Watson value of 1.983 is very close to 2 indicating that autocorrelation is not a problem in the model.

Table 4-55 Results of hierarchical multiple linear regression; with job satisfaction as the dependent variable; social work values as independent variables.

Variable Step1	Job satisfaction
Gender	-.058
Age	.172***
Health	-.050
Education	.008
Race	.039
Tenure	.215***
R	.492[a]
R^2	.242
F-Value	16.006***
D-W Value	1.963
Step 2	
Gender	-.059
Age	.175
Health	-.049
Education	.008
Race	.036
Tenure	.217
Social work values	-.015
R	.492[a]
R^2	.242
F-Value	13.698***
D-W Value	1.967

Note. Statistical significance: *p<.05;**p<.01;***p<.001

The relationship between social work values and job satisfaction was investigated using hierarchical linear regression. In the first step of hierarchical regression six predictors were entered: gender, health, race, education age and tenure. This model is statistically significant (R =.492; p< .001.) R^2 = .242 indicating that the model explains 24% of the variance in job satisfaction.

After entry of social work values, the total variance explained by the model as a whole remains unchanged, (R=492: p<.001). R^2=.242 meaning that social work values do not contribute some variation in job satisfaction. The Durbin-Watson value of 1.967 is very close to 2 indicating that autocorrelation is not a problem in the model.

The results of multiple linear regression carried out to investigate the relationship between work values and job satisfaction indicate that the null hypothesis that there is no association between work values and job satisfaction is partially supported since some predictors were not significant.

4.5.0 INFLUENCE STATISTICS

4.5.1 Cooks distance

Cook's distance is a measure of the overall influence of a case on the model. Any variable with a value greater than 1 would have an undue influence on the mode (Field, 2011). Cook's distance is used to identify cases that may have an influence on the model and identify them for possible removal to improve the model. A test on Cook's distance was carried out on the data and none of the cases had values greater than 1.

Another measure of influence is **leverage** which gauges the influence of the observed value of the outcome variable over the predicted values (Field, 2011, p. 217). The average leverage is defined as (k+1)/n where k is the number of predictors in the model and n is the number of participants (Field, 2011, p. 217). If there are no cases that exert undue influence on the model, then one would expect all of the leverage values to be close to average value (k+1)/n). Hoalglin and Welsch (1978) recommend investigating cases with values greater than twice the average (2(k+1)/n).

4.5.2 Mahalanobis distance

This test measures the distance of cases from the mean(s) of the predictor variable(s). One needs to look for the cases with the highest values (Field, 2011, p. 217). It is not easy to establish a cut-off point at which the investigator needs to worry (Field, 2011, p. 217).

Barnett and Lewis (1978) suggest that with large samples (N=500) and five predictors, values above 25 are cause for concern.

In smaller samples (N=100) and few predictors for example 3 values greater than 15 are cause for concern. With very small samples (N=30) and 2 predictors values greater than 11 are problematic. According to the leverage tests of the distance of values of the independent variables in relation to each other, values outside of the range of between (k+1)/n=7/308=0.022 and 2(k+1)/n=0.045 were identified for exclusion. According to this exclusion threshold, the following cases were identified as potentially problematic: 8; 125; 194; 210; 225; 256; 270 and 273.

According to the tests of Mahalanobis distance, in terms of the table of Chi-squared statistics with seven degrees of freedom, and requiring a significance level of $p<.05$, values of over 14 were taken to represent outliers. According to this criterion, cases 8; 125; 194; 210; 225; 256; 270 and 273.were identified for removal.

According to the Cook's distance cut-off criterion of 4/n, or 0.012, values greater than this were identified for removal. Cases 15;48;51;104;113;125;191;216;243;183; were taken to be potentially problematic. Cases that were common to the leverage test and Mahalanobis test were identified as outliers. With these eight cases removed, regression analysis was carried out again. The results are shown below.

4.6.0. MULTIPLE LINEAR REGRESSION AFTER REMOVAL OF OUTLIERS.

Table 4-56 Results of hierarchical multiple linear regression with sources of motivation as the dependent variable below; Age, education, tenure, gender, race and health as independent values.

Variable Step 1	Dimensions of sources of motivation				
	Intrinsic motivation coefficient	Extrinsic motivation coefficient	Internal self-motivation coefficient	External self-motivation coefficient	Goal internalization coefficient
Gender	.033	.155	.134	.050	-.145
Health	-.022	.067	-.050	-.057	.072
Education	.019	.031	.013	.040	.040
Race	-.118	-.081	.077	.034	.079
Tenure	-.207	-.082	.084	.029	.114
R	.328	.130	.187	.170	.240
R^2	.108	017	.035	.029	.058
F-Value	7.094***	1.006	2.134	1.752	3.591**
D-W Value	1.745	1.863	1.627	1.547	1.470
Step2					
Gender	.054	.160	.111	.045	-.159
Health	.038	.081	-.115	-.070	.032
Education	.023	.032	.009	.039	.037
Race	-.139	-.085	.099	.038	.092
Tenure	-.088	-.056	-.043	.005	.035
Age	-.262***	-.058	.280***	.053	.172*
R	.393	.134	.312	.183	.272
R^2	.154	.018	.097	.034	.074
F-Value	8.896***	.896	5.261***	1.698	3.900**
D-W Value	1.739	1.871	1.643	1.563	1.479

Note. Statistical significance: *p<.05;**p<.01;***p<.001

In the first step of hierarchical regression, five predictors were entered: gender, health, race, education and tenure. This model was statistically significant (R =.328; p< .001.) R^2 = .108 indicating that the model explained 11% of the variance in intrinsic motivation. After entry of age (cohort membership) the total variance explained by the model as a whole was .154 indicating that the model as a whole explained 15% of variance in intrinsic motivation (F= 8.896; p < .001). The introduction of age explained additionally 4% of variance in intrinsic motivation after controlling for gender, health, education, race and tenure.

The same process was performed for all the other dimensions of sources of motivation; extrinsic motivation, internal self-motion, external self-motivation and goal internalisation. The introduction of age in the final model for extrinsic motivation and external self-motivation does not improve the models much since it explains less than 1% of variation in both sources of motivation. The introduction of age in internal self-motivation improves the final model and the variance explained by age improves from 4% to 10% which means age explains additionally 6% of variance in internal self-motivation. The introduction of age in goal internalisation results in a 1% increase in the variation explained by age for goal internalisation motivation. Three out five predictor variables had significant contributions to the dependent variable. The results are consistent with multiple linear regression carried out on raw data above.

Table 4-57 Results of hierarchical multiple linear regression with work values as the dependent variable; Age, education, tenure, gender, race and health as independent values

	Dimensions of work values				
	Intrinsic work values	Extrinsic work values	Prestige work values	Altruistic work values	Social work values
Gender	.019	-.055	.021	.023	-.096
Health	.082	.093	.024	-.032	.168
Education	-.054	-.052	-.054	-.065	-.027
Race	.026	-.085	-.064	-.039	-.171
Tenure	.069	-.059	-.192***	-.143***	.223***
R	.206	.188	.376	.290	329
R^2	.043	.035	.141	.084	.108
F-Value	2.616*	2.160*	9.691***	5.385***	7.136***
D-W Value	1.753	2.228	1.889	1.682	1.887
Step2					
Gender	.010	-.040	.031	.040	-.114
Health	.056	.135	.052	.014	.117
Education	-.056	-.049	-.051	-.061	-.031
Race	.035	-.100	-.074	-.055	-.154
Tenure	.018	.024	-.137**	-.052	.124
Age	.112*	-.181**	-.121*	-.199**	.218**
R	.239	.249	.394	.338	.363
R^2	.057	.062	.155	.114	.132
F-Value	2.960**	3.225**	8.984***	6.294***	7.431***
D-W Value	1.775	2.266	1.839	1.663	1.903

Note. Statistical significance: *p<.05;**p<.01;***p<.001

In the first step of hierarchical regression, five predictors were entered: gender, health, race, education and tenure. This model was statistically significant (R =.206; p< .001.) R^2 = .043 indicating that the model explained 4% of the variance in intrinsic work values. After entry of age (cohort membership) the total variance explained by the model as a whole was .057 indicating that the model as a whole explained 6% of variance in intrinsic work values (F= 2.960; p < .05). The introduction of age explained additionally 2% of variance in intrinsic work values after controlling for gender, health, education, race and tenure. The null hypothesis that there is no association between cohort membership and intrinsic work values is rejected since the result is significant.

Extrinsic work values were regressed against age after controlling for gender, health, race, education and tenure and there was a slight improvement in the final model with age explaining additional 2% of variation in extrinsic work values which is significant.

For prestige work values, age additionally explained 2% variation in prestige work values. The final model is significant at the .05 level of significance indicating that the null hypothesis that there is no association between cohort membership and prestige work values be rejected. Age also contributes towards altruistic and social work values by an additional 4% variation in altruistic work values and 2% for social work values. The null hypothesis that there is no association between work values is rejected for the five dimensions of work values. The above results are a slight improvement on raw data which had four out of five significant results. The removal of outliers improves the model slightly.

Table 4-58 Results of hierarchical multiple linear regression with organisational commitment as the dependent variable; Age, education, tenure, gender, race and health as independent values.

	Dimensions of Organisational commitment		
	Affective	Continuance	Normative
Gender	-.174	-.022	.064
Health	.022	-.132	-.136
Education	.021	.039	.020
Race	-.078	-.003	.050
Tenure	-.369***	-.298***	-.249***
R	.413	.359	.363
R^2	.170	.129	.132
F-Value	12.076***	8.716***	8.946***
D-W Value	1.958	1.811	1.725
Step 2			
Gender	-.149	.005	.075
Health	.091	-.056	-.105
Education	.026	.045	.022
Race	-.101	-.029	.039
Tenure	-.233***	-.148*	-.189*
Age	-.299***	-.330***	-.132
R	.454	.418	.377
R^2	.207	.175	.142
F-Value	12.712***	10.333***	8.081***
D-W Value	2.036	1.868	1.743

Note. Statistical significance: *p<.05;**p<.01;***p<.001

In the first step of hierarchical regression, five predictors were entered: gender, health, race, education and tenure. This model was statistically significant (R =.413; p< .001.) R^2 = .170 indicating that the model explained 17% of the variance in affective commitment. After entry of age (cohort membership) the total variance explained by the model as a whole was .207 indicating that the model as a whole explained 21% of variance in affective commitment (F= 12.712; p < .001). The introduction of age explained additionally 4% of variance in affective commitment after controlling for gender, health, education, race and tenure. Continuance commitment was regressed against age after controlling for gender, health, education race and tenure and the contribution of age towards continuance commitment was R^2=.175 up from .129 in the first step which indicates that age contributed an additional 4% towards continuance commitment.

Normative commitment was also regressed against the independent variable. In the first step of regression, the results indicated that the model explained .132 (13%) of variation in normative commitment. In the second step the results indicated that the model explained .142 (14%) of variation in normative commitment which indicated that age contributed an additional 1% variation in normative commitment which was not significant. The removal of outliers does not improve the models that much as the results closely resemble the results from raw data.

Table 4-59 Results of hierarchical multiple linear regression with job satisfaction as the dependent variable; Age, education, tenure, gender, race and health as independent values.

Variable Step1	Job satisfaction
Gender	-.033
Health	-.031
Education	.005
Race	.007
Tenure	.314***
R	.479
R^2	.230
F-Value	17.537***
D-W Value	1.936
Step 2	Job satisfaction
Gender	-.047
Health	-.068
Education	.002
Race	.019
Tenure	.241***
Age	.159***
R	.500
R^2	.250
F-Value	16.271***
D-W Value	1.957

Note. Statistical significance: *p<.05;**p<.01;***p<.001

In the first step of hierarchical regression, five predictors were entered: gender, health, race, education and tenure. This model was statistically significant (R =.479; p< .001.) R^2 =.230 indicating that the model explained 23% of the variance in job satisfaction. After entry of age (cohort membership) the total variance explained by the model as a whole was .250 indicating that the model as a whole explained 25% of variance in job satisfaction (F= 16.271; p < .01). The introduction of age explained additionally 2% of variance in job satisfaction after controlling for gender, health, education, race and tenure. The null hypothesis that there is no association between cohort membership and job satisfaction is thus rejected.

To further test the association between cohort membership and the four variables under study, transformation was carried out on the data since it violated some of the assumptions. Below are the results of regression after square root transformation and log transformation

Table 4-60 Results of hierarchical multiple linear regression after square root transformation, with sources of motivation as the dependent variable below.

Variable Step 1	Dimensions of sources of motivation				
	Intrinsic motivation coefficient	Extrinsic motivation coefficient	Internal self-motivation coefficient	External self-motivation coefficient	Goal internalization coefficient
Gender	.012	.029	.009	.038	-.033
Health	-.012	.010	-.014	-.013	.002
Education	.003	.000	.012	.005	.014
Race	-.024	-.018	.000	.016	.023
Tenure	-.057***	-.019	.008	.025	.039**
R	.318***	.135[a]	.181[a]	.195*	.236**
R^2	.101	.018	.033	.038	.056
F-Value	6.806***	1.121	2.047	2.397*	3.555**
D-W Value	1.743	1.815	1.478	1.571	1.454
Step2					
Gender	.016	.030	.008	.033	-.036
Health	.005	.013	-.019	-.030	-.009
Education	.005	.001	.012	.003	.012
Race	-.027	-.018	.001	.019	.024
Tenure	-.025	-.012	-.001	-.008	.018
Age	-.076***	-.016	.020	.077***	.049*
R	.390***	.143[a]	.207[a]	.317***	.270**
R^2	.152	.020	.043	.101	.073
F-Value	8.974***	1.044	2.251*	5.620	3.935**
D-W Value	1.743	1.819	1.498	1.607	1.467

Note. Statistical significance: *p<.05;**p<.01;***p<.001

To further validate the results found earlier, transformations were carried out on the data. Two transformations were carried out, log transformation and square root transformation. Hierarchical multiple linear regression was then performed on the data to investigate the ability of age (cohort membership) to predict sources of motivation after controlling for demographic factors such as gender, health, education, race and tenure.

In the first step of hierarchical regression, five predictors were entered: gender, health, race, education and tenure. This model was statistically significant (R =.318; p< .001.) R^2 = .101 indicating that the model explained 10% of the variance in intrinsic motivation.

After entry of age (cohort membership) the total variance explained by the model as a whole was .152 indicating that the model as a whole explained 15% of variance in intrinsic motivation (F= 8.974; p < .001). The results of regression after transformation are not very different from the results of regression on raw data. The introduction of age explained additionally 5% of variance in intrinsic motivation after controlling for gender, health, education, race and tenure. In the final model age is the only statistically significant predictor.

The same process was performed for all the other dimensions of sources of motivation; extrinsic motivation, internal self-motion, external self-motivation and goal internalisation. The results after the introduction of age in the final models on the remaining variables; extrinsic motivation, internal self-motivation, external self-motivation and goal internalisation are comparable to the results from regressions carried out on raw data. Three out of five variables have results that are significant and the results indicate that the hypothesis that there is no association between sources of motivation and cohort membership is partially supported.

Table 4-61 Results of hierarchical multiple linear regression after square root transformation with work values as the dependent variable below.

	Dimensions of work values				
	Intrinsic work values	Extrinsic work values	Prestige work values	Altruistic work values	Social work values
Gender	.003	-.011	.005	.009	-.026
Health	.027	.028	.002	-.016	.034
Education	-.021*	-.020	-.019*	-.022	-.005
Race	.000	-.024	-.019	-.012	-.053
Tenure	.028*	-.018	-.059***	-.044**	.077
R	.214*	.181[a]	.366***	.284***	.322****
R^2	.046	.033	.134	.080	.104
F-Value	2.891*	2.049	9.314***	5.287***	6.995***
D-W Value	1.771	2.207	1.798	1.659	1.924
Step2					
Gender	.001	-.007	.008	.013	-.030
Health	.019	.042*	.011	.000	.020
Education	-.022*	-.018	-.018*	-.020*	-.007
Race	.002	-.026	-.020	-.014	-.050*
Tenure	.013	.008	-.042**	-.015	.050**
Age	.037*	-.061**	-.041*	-.069**	.062*
R	.242**	.243**	.386***	.340***	.351***
R^2	.059	.059	.149	.115	.123
F-Value	3.124**	3.142**	8.778***	6.550***	7.027***
D-W Value	1.784	2.246	1.751	1.634	1.931

Note. Statistical significance: *p<.05;**p<.01;***p<.001

In the first step of hierarchical regression, five predictors were entered: gender, health, race, education and tenure. This model was statistically significant (R =.214; p< .001.) R^2 = .046 indicating that the model explained 5% of the variance in intrinsic work values. This is a slight improvement from the raw data which had an R^2 indicating that the final model explained 4% of intrinsic motivation. After entry of age (cohort membership) the total variance explained by the model as a whole was .059 indicating that the model as a whole explained 6% of variance in intrinsic work values (F= 3.124; p < .01). The introduction of age explained additionally 1% of variance in intrinsic work values after controlling for gender, health, education, race and tenure. Although there is some improvement in the model, the results are still comparable to the results of regression carried out on raw data.

The other four variables were regressed against age after controlling for gender, health, race, education and the results are still comparable to the results from raw data.

Table 4-62 Results of hierarchical multiple linear regression after square root transformation with on organisational commitment as the dependent variable below.

	Dimensions of Organisational commitment		
	Affective	Continuance	Normative
Gender	-.041	-.003	.020
Health	-.003	-.033	-.031
Education	.001	.013	.003
Race	-.017	.009	.017
Tenure	-.102***	-.095***	-.076***
R	.392***	.375***	.361***
R^2	.154	.140	.131
F-Value	10.961***	9.865***	9.075***
D-W Value	1.909	1.782	1.726
Step 2			
Gender	-.035	.003	.022
Health	.020	-.011	-.022
Education	.004	.016	.004
Race	-.021	.006	.015
Tenure	-.058**	-.054**	-.057***
Age	-.101***	-.095***	-.043*
R	.450***	.431***	.379***
R^2	.203	.186	.143
F-Value	12.764***	11.425***	8.402***
D-W Value	2.005	1.835	1.753

Note. Statistical significance: *p<.05;**p<.01;***p<.001

In the first step of hierarchical regression, five predictors were entered: gender, health, race, education and tenure. This model was statistically significant (R =.392; p< .001.) R^2 = .154 indicating that the model explained 15% of the variance in affective commitment. After entry of age (cohort membership) the total variance explained by the model as a whole was R^2=.203 indicating that the model as a whole explained 20% of variance in affective commitment (F= 12.764; p < .001). The introduction of age explained additionally 5% of variance in affective commitment after controlling for gender, health, education, race and tenure.

The second dimension for organisational commitment (continuance) was regressed against age after controlling for gender, health, education race and tenure and the contribution of age towards continuance commitment was R^2=.186 up from .14 in the first step which indicates that age contributed an additional 4% towards continuance commitment.

Normative commitment was also regressed against the independent variable. In the first step of regression, the final model indicated that the model explained .131 (13%) of variation in normative commitment. In the second step the final model indicated that the model explained .143 (14%) which indicated that age contributed an additional 1% variation in normative commitment. All the three final modules are comparable to the results from raw data.

Table 4-63 Results of hierarchical multiple linear regression after square root transformation with job satisfaction as the dependent variable below.

Variable Step1	Job satisfaction
Gender	-.018
Health	-.003
Education	.004
Race	.011
Tenure	.090
R	.463***
R^2	.214
F-Value	16.476***
D-W Value	1.945
Step 2	
Gender	-.021
Health	-.015
Education	.003
Race	.013
Tenure	.067
Age	.053
R	.489***
R^2	.239
F-Value	15.745***
D-W Value	1.982

Note. Statistical significance: *p<.05;**p<.01;***p<.001

In the first step of hierarchical regression, five predictors were entered: gender, health, race, education and tenure. This model was statistically significant (R =.463; p< .001.) R^2 =.214 indicating that the model explained 21% of the variance in job satisfaction. After entry of age (cohort membership) the total variance explained by the model as a whole was .239 indicating that the model as a whole explained 24% of variance in job satisfaction (F= 15.745; p < .01).

The introduction of age explained additionally 3% of variance in job satisfaction after controlling for gender, health, education, race and tenure. The results are still consistent with the earlier results. Below are results of hierarchical multiple linear regression after log transformation.

Table 4-64 Results of hierarchical multiple linear regression after log transformation, with sources of motivation as the dependent variable below.

Variable Step 1	Dimensions of sources of motivation				
	Intrinsic motivation coefficient	Extrinsic motivation coefficient	Internal self-motivation coefficient	External self-motivation coefficient	Goal internalization coefficient
Gender	.016	.024	.008	.043	-.035
Health	-.015	.003	-.015	-.014	.001
Education	.003	-.003	.013	.006	.015
Race	-.027	-.017	.000	.018	.028
Tenure	-.065***	-.020	.008	.029*	.045**
R	.315***	.144	.185[a]	.198*	.233**
R^2	.099	.021	.034	.039	.054
F-Value	6.669***	1.273	2.143	2.463*	3.468**
D-W Value	1.760	1.762	1.456	1.553	1.433
Step2					
Gender	.021	.024	.007	.038	-.038
Health	.004	.006	-.020	-.034	-.012
Education	.006	-.002	.013	.004	.014
Race	-.030	-.018	.001	.022	.031
Tenure	-.028	-.014	-.001	-.008	.020
Age	-.086***	-.013	.021	.086***	.057
R	.385***	.149[a]	.211**	.317***	.267**
R^2	.148	.022	.045	.101	.071
F-Value	8.740***	1.146	2.342**	5.614***	3.858**
D-W Value	1.751	1.763	1.745	1.584	1.446

Note. Statistical significance: *p<.05;**p<.01;***p<.001

Hierarchical multiple linear regression was performed on the data after log transformation was carried out to investigate the ability of age (cohort membership) to predict sources of motivation after controlling for demographic factors such as gender, health, education, race and tenure.

In the first step of hierarchical regression, five predictors were entered: gender, health, race, education and tenure. This model was statistically significant (R =.315; p< .001.) R^2 = .099 indicating that the model explained 10% of the variance in intrinsic motivation.

After entry of age, (cohort membership) the total variance explained by the model as a whole was .148 indicating that the model as a whole explained 15% of variance in intrinsic motivation ($F= 8.740$; $p < .001$). The results of regression after log transformation are not very different from the results of regression on raw data. The introduction of age explained additionally 5% of variance in intrinsic motivation after controlling for gender, health, education, race and tenure just as it did on raw data. In the final model age is the only statistically significant variable.

The same process was performed for all the other dimensions of sources of motivation; extrinsic motivation, internal self-motion, external self-motivation and goal internalisation. The results from the introduction of age in the final models for the remaining variables extrinsic motivation, internal self-motivation, external self-motivation and goal internalisation are consistent with the results from regression carried out on raw data. Based on the results from transformed data, it may thus be concluded that the results of regression carried out on raw data are fairly accurate.

Table 4-65 Results of hierarchical multiple linear regression after log transformation, with work values as the dependent variable below.

	Dimensions of work values				
	Intrinsic work values	Extrinsic work values	Prestige work values	Altruistic work values	Social work values
Gender	.003	-.011	.004	.007	-.032
Health	.045	.047	.005	-.023	.038
Education	-.031*	-.030	-.025*	-.031*	-.003
Race	-.002	-.033	-.026	-.018	-.069
Tenure	.044*	-.029	-.077***	-.058**	.103
R	.217*	.194*	.355[a]	.279***	.311**
R^2	.047	.038	.126	.078	.097
F-Value	2.977*	2.357*	8.707	5.083***	6.468***
D-W Value	1.761	2.210	1.768	1.681	1.941
Step2					
Gender	-005	-.006	.007	.013	-.036
Health	.032	.065*	.018	-.001	.020
Education	-.033*	-.028	-.024*	-.029*	-.005
Race	.001	-.036	-.028	-.021	-.066*
Tenure	.019	.006	-.054**	-.016	.068**
Age	.057*	-.081**	-.054*	-.098***	.080*
R	.245**	.245**	.375***	.339***	.337***
R^2	.060	.060	.141	.115	.114
F-Value	3.211**	3.211**	8.231***	6.493	6.442***
D-W Value	1.776	2.242	1.725	1.651	1.950

Note. Statistical significance: *p<.05;**p<.01;***p<.001

Hierarchical multiple linear regression was performed on the data after log transformation to investigate the ability of age (cohort membership) to predict sources of work values after controlling for demographic factors such as gender, health, education, race and tenure.

In the first step of hierarchical regression, five predictors were entered: gender, health, race, education and tenure. This model was statistically significant (R =.217; p< .001.) R^2 = .047 indicating that the model explained 5% of the variance in intrinsic work values. After entry of age (cohort membership) the total variance explained by the model as a whole was .060 indicating that the model as a whole explained 6% of variance in intrinsic work values (F= 3.211; p < .001). The results of regression after log transformation are not very different from the results of regression on raw data.

The introduction of age explained additionally 1% of variance in intrinsic work values after controlling for gender, health, education, race and tenure just as it did on raw data.

The same process was performed for all the other dimensions of work values; extrinsic work values, altruistic work values, prestige work values and social work values. The results from the introduction of age in the final models for the remaining variables are consistent with the results from regression carried out on raw data.

Table 4-66 Results of hierarchical multiple linear regression log transformation with on organisational commitment as the dependent variable below.

	Dimensions of Organisational commitment		
	Affective	Continuance	Normative
Gender	-.046	-.001	.024
Health	-.003	-.040	-.037
Education	.001	.015	.003
Race	-.019	.013	.021
Tenure	-.123***	-.116***	-.091***
R	.387***	.377***	.359***
R^2	.150	.142	.129
F-Value	10.659***	10.005***	8.927***
D-W Value	1.898	1.761	1.723
Step 2			
Gender	-.039	.006	.027
Health	.024	-.014	-.025
Education	.004	.019	.004
Race	-.024	.008	.019
Tenure	-.071**	-.066**	-.069***
Age	-.120***	-.117***	-.051*
R	.444***	.435***	.376***
R^2	.197	.189	.141
F-Value	12.322***	11.684***	8.237***
D-W Value	1.990	1.819	1.750

Note. Statistical significance: *p<.05;**p<.01;***p<.001

In the first step of hierarchical regression on log transformed data, five predictors were entered: gender, health, race, education and tenure. This model was statistically significant (R =.387; p< .001.) R^2 = .150 indicating that the model explained 15% of the variance in affective commitment. After entry of age (cohort membership) the total variance explained by the model as a whole was .197 indicating that the model as a whole explained 20% of variance in affective commitment (F= 12.322; p < .001).

The introduction of age explained additionally 5% of variance in affective commitment after controlling for gender, health, education, race and tenure.

The second dimension for organisational commitment (continuance) was regressed against age after controlling for gender, health, education race and tenure and the contribution of age towards continuance commitment was R^2=.189 up from .143 in the first step which indicates that age contributed an additional 5% towards continuance commitment.

Normative commitment was also regressed against the independent variable. In the first step of regression, the final model indicated that the model explained .129 (13%) of variation in normative commitment. In the second step the final model indicated that the model explained .141 (14%) which indicated that age contributed an additional 1% variation in normative commitment. All the three final modules are comparable to the results from raw data.

Table 4-67 Results of hierarchical multiple linear regression after log transformation with job satisfaction as the dependent variable below.

Variable Step1	Job satisfaction
Gender	-.027
Health	-.002
Education	.006
Race	.014
Tenure	.113***
R	.458***
R^2	.210
F-Value	16.027***
D-W Value	1.962
Step 2	
Gender	-.031
Health	-.017
Education	.004
Race	.016
Tenure	.085***
Age	.065**
R	.482***
R^2	.233
F-Value	15.211***
D-W Value	2.004

Note. Statistical significance: *p<.05;**p<.01;***p<.001

In the first step of hierarchical regression on log transformed data, five predictors were entered: gender, health, race, education and tenure.

This model was statistically significant (R =.458; p< .001.) R^2 =.210 indicating that the model explained 21% of the variance in job satisfaction. After entry of age (cohort membership) the total variance explained by the model as a whole was .233 indicating that the model as a whole explained 23% of variance in job satisfaction (F= 15.211; p < .01). The introduction of age explained additionally 2% of variance in job satisfaction after controlling for gender, health, education, race and tenure. The results are still consistent with the earlier results.

4.7.0 Independent T-Tests

This test is used to compare the statistical significance of a possible difference between means of two groups on some independent variable and the two groups are independent of each other (Field 2011).The present study sought to examine the association between cohort membership (independent variable) and the four dependent variables of interest in the study. In order to compare the means of the three age groups representing cohort membership, two groups were compared at a time until all the three groups had been compared against one another for each dependent variable. The results of the independent t-test are blow.

The figures 1 represent Generation Y, 2 Generation X and 3 Baby Boomers.

Table 4-68 t-tests on motivation; Generation X and Y below

Group Statistics

Motivation	Age	N	Mean	Std. Deviation	Std. Error Mean
Intrinsic	1	115	2.21	.810	.075
	2	119	2.62	.862	.079
Extrinsic	1	115	1.73	.700	.065
	2	119	1.82	.715	.065
External self	1	115	2.59	.861	.080
	2	119	2.25	.767	.070
Internal self	1	115	1.99	.765	.071
	2	119	1.81	.522	.048
Goal Internalisation	1	115	2.85	1.05	.098
	2	119	2.56	.942	.086

On average, Generation X have higher intrinsic motivation (M=2.62; SE=.079) than Generation Y (M=2.21; SE=.075). This difference was significant (t=-373, p<.05). Generation X also had higher extrinsic motivation (M=1.82; SE=.065) than Generation Y (M=1.73: SE=.065. The difference was however not significant (t=-1.00; p>.05). The average for external self-motivation was higher for Generation Y (M=2.59; SE=.080) than Generation X (M=2.25; SE=.070). This difference was significant (t=3.15; p<.05). Internal self-motivation was also higher for Generation Y (M= 1.99; SE=.071) than Generation Y (M=1.81: SE=.048).

The difference was also significant (t=2.028; p<.05). Goal internalisation was higher for Generation Y (M=2.85SE=.098) than Generation X (M=2.56; SE=.086). The difference was significant (t=2.255; p<.05).

Table 4-69 T-tests on motivation: Generation X and Y below

Sources of motivation		Levene's Test for Equality of Variances		t	Sig. (2-tailed)	95% Confidence Interval of the Difference	
		F	Sig.			Lower	Upper
Intrinsic	Equal variances assumed	1.082	.299	-3.732	.000***	-.6243	-.1929
	Equal variances not assumed			-3.736	.000***	-.6241	-.1931
Extrinsic	Equal variances assumed	.093	.760	-1.003	.317	-.27531	.08951
	Equal variances not assumed			-1.004	.317	-.27524	.08944
External self	Equal variances assumed	4.511	.035	3.158	.002**	.12656	.54643
	Equal variances not assumed			3.152	.002**	.12612	.54687
Internal self	Equal variances assumed	3.177	.076	2.028	.044*	.005	.341
	Equal variances not assumed			2.016	.045*	.004	.343
Goal Internalisation	Equal variances assumed	9.154	.003	2.255	.025*	.03720	.55249
	Equal variances not assumed			2.250	.025*	.03667	.5530

Table 4- 69 above shows that Generation X and Y have significant differences in four out of five sources of motivation. There is however no significant differences between Generation X and Y in terms of extrinsic work values.

Table 4-70T-tests on work values: Generation X and Y below

Group Statistics

Work values	Age	N	Mean	Std. Deviation	Std. Error Mean
Extrinsic Values	1	115	1.82	.810	.075
	2	119	1.57	.564	.051
Intrinsic Values	1	115	1.51	.446	.041
	2	119	1.55	.584	.053
Altruistic Values	1	115	2.23	.839	.078
	2	119	1.96	.671	.061
Prestige Values	1	115	2.47	.945	.088
	2	119	1.94	.638	.058
Social Values	1	115	1.83	.755	.070
	2	119	1.91	.750	.069

On average, Generation Y have higher extrinsic work values (M=1.82; SE=.075) than Generation X (M=1.57; SE=.051).This difference was significant (t=2.733, p<.05). Generation X had higher intrinsic work values (M=1.55; SE=.053) than Generation Y (M=1.51; SE .041). The difference was however not significant (t=-526; p>.05). The average for altruistic work values was higher for Generation Y (M=2.23; SE=.078) than Generation X (M=1.96; SE=.061). The difference was significant (t=2.791; p<.05). The average for prestige work values was higher for Generation Y (M=2.47; SE=.088). The difference was also significant (t=5.025; p<.05). Social work values were higher for Generation X (M=1.91: SE=, 069) than Generation Y (M=1.83; SE=.070). The difference was however not significant (t=-871; p<.05). From the above, it can be observed that in general, the youngest generation (Y) has higher work values than generation X. However there was no significant difference between the two generations in terms of intrinsic work values.

Table 4-71 T-tests on work values: Generation X and Y below

Work values		Levene's Test for Equality of Variances		t	Sig. (2-tailed)	95% Confidence Interval of the Difference	
		F	Sig.			Lower	Upper
Extrinsic Values	Equal variances assumed	7.134	.008	2.733	.007**	.0694	.42829
	Equal variances not assumed			2.716	.007**	.0682	.42950
Intrinsic Values	Equal variances assumed	1.667	.198	-.526	.599	-.1701	.0984
	Equal variances not assumed			-.529	.598	-.1696	.0978
Altruistic Values	Equal variances assumed	10.710	.001	2.791	.006**	.0814	.4723
	Equal variances not assumed			2.780	.006**	.0806	.4731
Prestige Values	Equal variances assumed	31.017	.000	5.025	.000***	.3212	.7356
	Equal variances not assumed			4.993	.000***	.3197	.7372
Social Values	Equal variances assumed	.137	.712	-.871	.385	-.280	.108
	Equal variances not assumed			-.871	.385	-.280	.108

Generation X and Y have significant differences in three work values, namely extrinsic, altruistic and prestige work values. The other two dimensions of work values show no significant difference between the two generations.

Table 4-72 T-tests on organisational commitment, Generation X and Y below

Group Statistics

Commitment/satisfaction	Age	N	Mean	Std. Deviation	Std. Error Mean
Affective	1	115	3.69	.891	.083
	2	119	3.10	.906	.083
Continuance	1	115	3.53	.930	.086
	2	119	3.19	.936	.085
Normative	1	115	3.46	.899	.084
	2	119	3.16	.856	.078
Job Satisfaction	1	115	2.49	.636	.059
	2	119	2.83	.618	.057

On average, Generation Y have higher affective commitment (M=3.69; SE=.083) than Generation X (M=3.10; SE=.083). This difference was significant (t=4.962, p<.05). Generation Y also had higher continuance commitment (M=3.53; SE=.086) than Generation X (M=3.19: SE=.085. The difference was significant (t=2.741; p<05). The average for normative commitment was also higher for Generation Y (M=3.46; SE=.084) than Generation X (M=3.16; SE=.078). This difference was significant (t=2.551; p<.05). Job satisfaction however, was higher for Generation X (M=2.83; SE=.057) than Generation Y (M=2.49: SE=.059). The difference was also significant (t=-4.053; p<.05). Generation Y displayed higher commitment than Generation X but for job satisfaction, Generation X had the higher mean.

Table 4-73, T-tests on organisational commitment, Generation X and Y below

		Levene's Test for Equality of Variances					
		F	Sig.	t	Sig. (2-tailed)	95% Confidence Interval of the Difference	
						Lower	Upper
Affective	Equal variances assumed	.776	.379	4.962	.000***	.3514	.8151
	Equal variances not assumed			4.964	.000***	.3515	.8151
Continuance	Equal variances assumed	.111	.740	2.741	.007**	.0940	.5748
	Equal variances not assumed			2.741	.007**	.0940	.5748
Normative	Equal variances assumed	.153	.696	2.551	.011*	.067	.519
	Equal variances not assumed			2.549	.011*	.066	.519
Job Satisfaction	Equal variances assumed	.616	.433	-4.053	.000***	-.494	-.171
	Equal variances not assumed			-4.051	.000***	-.494	-.171

According to the results in table 4-73 the two generations X and Y have significant differences in all the three dimensions of organisational commitment.

Table 4-74 T-tests on motivation, Generation X and Baby Boomers below

Group Statistics

Sources of motivation	Age	N	Mean	Std. Deviation	Std. Error Mean
Intrinsic	1	115	2.21	.810	.075
	3	74	3.06	.784	.091
Extrinsic	1	115	1.73	.700	.065
	3	74	2.07	.751	.087
External	1	115	2.59	.861	.080
	3	74	2.08	.698	.081
Internal	1	115	1.99	.765	.071
	3	74	1.71	.550	.064
Goal Internalisation	1	115	2.85	1.05	.098
	3	74	2.27	.889	.103

Table 4-74shows that Baby Boomers have higher intrinsic motivation (M=3.06; SE=.091) than Generation Y (M=2.21; SE=.075). This difference was significant (t=-7.117, p<.05). Baby Boomers also had higher extrinsic motivation (M=2.07; SE=.065) than Generation Y (M=1.73: SE=.065. The difference was significant (t=-3.169; p>.05). The average for external self-motivation was higher for Generation Y (M=2.59; SE=.080) than Baby Boomers (M=2.08; SE=.081). This difference was significant (t=4.257; p<.05). Internal self-motivation was also higher for Generation Y (M= 1.99; SE=.071) than Baby Boomers (M=1.71; SE=.064). The difference was also significant (t=2.666; p<.05). Goal internalisation was also higher for Generation Y (M=2.85SE=.098) than Baby Boomers (M=2.27; SE=.103). The difference was significant (t=3.947; p<.05).

Table 4-75, T-tests on motivation, Generation X and Baby Boomers below

Sources of motivation		Levene's Test for Equality of Variances		t	Sig. (2-tailed)	95% Confidence Interval of the Difference	
		F	Sig.			Lower	Upper
Intrinsic	Equal variances assumed	.000	.983	-7.117	.000***	-1.0840	-.6135
	Equal variances not assumed			-7.168	.000***	-1.0826	-.6149
Extrinsic	Equal variances assumed	1.098	.296	-3.169	.002**	-.5522	-.1284
	Equal variances not assumed			-3.120	.002**	-.5558	-.1248
External self	Equal variances assumed	12.182	.001	4.257	.000***	.2729	.7443
	Equal variances not assumed			4.454	.000***	.2832	.7339
Internal self	Equal variances assumed	2.153	.144	2.666	.008**	.071	.476
	Equal variances not assumed			2.858	.005**	.085	.463
Goal Internalisation	Equal variances assumed	17.487	.000	3.947	.000***	.2925	.8770
	Equal variances not assumed			4.096	.000***	.3030	.8665

According to the results in table 4-75 there are significant differences between Baby Boomers and Generation Y in sources of motivation. All the five sources of motivation indicate significant differences.

Table4-76, T-tests on work values Generation Y and Baby Boomers below

Group Statistics

Work values	Age	N	Mean	Std. Deviation	Std. Error Mean
Extrinsic Values	1	115	1.82	.810	.075
	3	74	1.43	.347	.040
Intrinsic Values	1	115	1.51	.446	.041
	3	74	1.74	.489	.056
Altruistic Values	1	115	2.23	.839	.078
	3	74	1.67	.498	.057
Prestige Values	1	115	2.47	.945	.088
	3	74	1.81	.664	.077
Social Values	1	115	1.83	.755	.070
	3	74	2.59	1.09	.127

On average, Generation Y have higher extrinsic work values (M=1.82; SE=.075) than Baby Boomers (M=1.43; SE=.040).This difference was significant (t=3.888, p<.05). Baby Boomers had higher intrinsic work values (M=1.74; SE=.056) than Generation Y (M=1.51; SE .041). The difference was significant (t=-3.353; p>.05). The average for altruistic work values was higher for Generation Y (M=2.23; SE=.078) than Baby Boomers (M=1.1.67; SE=.057). The difference was significant (t=5.328; p<.05). The average for prestige work values was higher for Generation Y (M=2.47; SE=.088) than Baby Boomers (M=1.81; SE=.070). The difference was also significant (t=5.204; p<.05). Social work values were higher for Baby Boomers (M=2.59: SE=.127) than Generation Y (M=1.83; SE=.070). The difference was also significant (t=--5.675; p<.05).

Table 4-77 T-tests on work values Generation Y and Baby Boomers below

Work values		Levene's Test for Equality of Variances		t	Sig. (2-tailed)	95% Confidence Interval of the Difference	
		F	Sig.			Lower	Upper
Extrinsic Values	Equal variances assumed	19.482	.000	3.888	.000***	.1910	.5846
	Equal variances not assumed			4.524	.000***	.2185	.5571
Intrinsic Values	Equal variances assumed	.238	.626	-3.353	.001**	-.3681	-.0954
	Equal variances not assumed			-3.286	.001**	-.3712	-.0923
Altruistic Values	Equal variances assumed	15.937	.000	5.238	.000***	.3531	.7798
	Equal variances not assumed			5.817	.000***	.3743	.7586
Prestige Values	Equal variances assumed	24.639	.000	5.204	.000***	.4080	.9062
	Equal variances not assumed			5.604	.000***	.4258	.8884
Social Values	Equal variances assumed	29.315	.000	-5.675	.000***	-1.027	-.497
	Equal variances not assumed			-5.256	.000***	-1.049	-.475

Table 4-78 shows that Baby Boomers and Generation Y have significant differences in all the five dimensions of work values.

Table 4-78 T-tests on commitment and job satisfaction, Generation Y and Baby Boomers below

Group Statistics

Commitment and job satisfaction	Age	N	Mean	Std. Deviation	Std. Error Mean
Affective	1	115	3.69	.891	.083
	3	74	2.57	1.00	.116
Continuance	1	115	3.53	.930	.086
	3	74	2.41	.958	.111
Normative	1	115	3.46	.899	.084
	3	74	2.72	.901	.105
Job Satisfaction	1	115	2.49.	636	.059
	3	74	3.17	.464	.054

On average, Generation Y have higher affective commitment (M=3.69; SE=.083) than Baby Boomers (M=2.57; SE=.116). This difference was significant (t=8.001, p<.05). Generation Y also had higher continuance commitment (M=3.53; SE=.086) than Baby Boomers (M=2.41: SE=.111. The difference was significant (t=7.976; p<05). The average for normative commitment was also higher for Generation Y (M=3.46; SE=.084) than Baby Boomers (M=2.72; SE=.105). This difference was significant (t=5.511; p<.05). Job satisfaction however, was higher for Baby Boomers (M=3.17; SE=.054) than Generation Y (M=2.49: SE=.059). The difference was also significant (t=-7.924; p<.05).

Table 4-79 T-tests on commitment and job satisfaction, Generation Y and Baby Boomers below.

Organisational commitment And job satisfaction		Levene's Test for Equality of Variances					
		F	Sig.	t	Sig. (2-tailed)	95% Confidence Interval of the Difference	
						Lower	Upper
Affective	Equal variances assumed	2.081	.151	8.001	.000***	.8409	1.391
	Equal variances not assumed			7.802	.000***	.8333	1.398
Continuance	Equal variances assumed	.819	.367	7.976	.000***	.8421	1.395
	Equal variances not assumed			7.924	.000***	.8399	1.397
Normative	Equal variances assumed	.525	.470	5.511	.000***	.474	1.003
	Equal variances not assumed			5.508	.000***	.474	1.004
Job Satisfaction	Equal variances assumed	12.360	.001	-7.924	.000***	-.848	-.510
	Equal variances not assumed			-8.467	.000***	-.837	-.521

According to the results in table 4-79 there are significant differences between Baby Boomers and Generation Y in all dimensions of organisational commitment. From the above results, it can be concluded that because there is no chance of overlap in the birth years of the two generations, there are significant differences that can be attributed to cohort membership (age).

Table 4-80 T-tests on motivation Generation X and Baby Boomers below

Group Statistics

Sources of motivation	Age	N	Mean	Std. Deviation	Std. Error Mean
Intrinsic	2	119	2.62	.862	.079
	3	74	3.06	.784	.091
Extrinsic	2	119	1.82	.715	.065
	3	74	2.07	.751	.087
External self	2	119	2.25	.767	.070
	3	74	2.08	.698	.081
Internal self	2	119	1.81	.522	.048
	3	74	1.71	.550	.064
Goal Internalisation	2	119	2.56	.942	.086
	3	74	2.27	.889	.103

Table 4-81 shows that Baby Boomers have higher intrinsic motivation (M=3.06; SE=.091) than Generation X (M=2.62; SE=.091). This difference was significant (t=-3.567, p<.05). Baby Boomers also had higher extrinsic motivation (M=2.07; SE=.087) than Generation X (M=1.82: SE=.065. The difference was significant (t=-2291; p>.05). The average for external self-motivation was higher for Generation X (M=2.25; SE=.070) than Baby Boomers (M=2.08; SE=.081). This difference was however not significant (t=1.568; p>.05). Internal self-motivation was also higher for Generation X (M= 1.81; SE=.048) than Baby Boomers (M=1.71; SE=.064). The difference was also not significant (t=1.276; p>.05). Goal internalisation was higher for Generation X (M=2.56SE=.086) than Baby Boomers (M=2.27; SE=.103). The difference was significant (t=2.123; p<.05).

Table 4-81 T-tests on motivation Generation X and Baby Boomers below

Sources of motivation		Levene's Test for Equality of Variances		t	Sig. (2-tailed)	95% Confidence Interval of the Difference	
		F	Sig.			Lower	Upper
Intrinsic motivation	Equal variances assumed	.876	.350	-3.567	.000***	-.6835	-.1967
	Equal variances not assumed			-3.647	.000***	-.6784	-.2019
Extrinsic motivation	Equal variances assumed	.608	.436	-2.291	.023*	-.4604	-.0344
	Equal variances not assumed			-2.265	.025*	-.4633	-.0315
External self-motivation	Equal variances assumed	2.672	.104	1.568	.119	-.0443	.3886
	Equal variances not assumed			1.603	.111	-.0398	.3841
Internal self-motivation	Equal variances assumed	.000	.984	1.276	.204	-.055	.256
	Equal variances not assumed			1.260	.210	-.057	.258
Goal Internalisation	Equal variances assumed	2.120	.147	2.123	.035*	.0205	.5593
	Equal variances not assumed			2.152	.033*	.0239	.5559

Table 4-81above shows that there are significant differences between Baby Boomers and Generation X in three out of five sources of motivation. The differences are not significant for internal- self and external -self motivation.

Table 4-82 T-tests on work values, Generation X and Baby Boomers below

Group Statistics

Work values	Age	N	Mean	Std. Deviation	Std. Error Mean
Extrinsic Values	2	119	1.57	.564	.051
	3	74	1.43	.347	.040
Intrinsic Values	2	119	1.55	.584	.053
	3	74	1.74	.489	.056
Altruistic Values	2	119	1.96	.671	.061
	3	74	1.67	.498	.057
Prestige Values	2	119	1.94	.638	.058
	3	74	1.81	.664	.077
Social Values	2	119	1.91	.750	.069
	3	74	2.59	1.09	.127

On average, Generation X have higher extrinsic work values (M=1.57; SE=.051) than Baby Boomers (M=1.43; SE=.040).This difference was not significant (t=1.905, p>.05). Baby Boomers had higher intrinsic work values (M=1.74; SE=.056) than Generation X (M=1.55; SE .053). The difference was significant (t=-2404; p<.05). The average for altruistic work values was higher for Generation X (M=1.96; SE=.061) than Baby Boomers (M=.1.67; SE=.057). The difference was significant (t=3.203; p<.05). The average for prestige work values was higher for Generation X (M=1.94; SE=.058) than Baby Boomers (M=1.81; SE=.077). The difference was also significant (t=1.340; p<.05). Social work values were higher for Baby Boomers (M=2.59: SE=.127) than Generation X (M=1.91; SE=.069). The difference was also significant (t=--5.102; p<.05).

Table 4-83 T-tests: on work values Baby Boomers and Generation X below

Work values		Levene's Test for Equality of Variances		t	Sig. (2-tailed)	95% Confidence Interval of the Difference	
		F	Sig.			Lower	Upper
Extrinsic Values	Equal variances assumed	8.217	.005	1.905	.058	-.0049	.2829
	Equal variances not assumed			2.117	.036*	.0094	.2685
Intrinsic Values	Equal variances assumed	.461	.498	-2.405	.017*	-.3566	-.0352
	Equal variances not assumed			-2.506	.013*	-.3502	-.0416
Altruistic Values	Equal variances assumed	.514	.474	3.203	.002**	.1112	.4679
	Equal variances not assumed			3.428	.001**	.1229	.4562
Prestige Values	Equal variances assumed	.215	.644	1.340	.182	-.0607	.3180
	Equal variances not assumed			1.327	.186	-.0628	.3201
Social Values	Equal variances assumed	32.068	.000	-5.102	.000**	-.937	-.415
	Equal variances not assumed			-4.691	.000***	-.962	-.391

According to the results in Table 4-84 there are significant differences between Baby Boomers and Generation X in three out five work values. Intrinsic work values and prestige work values have no significant results.

Table 4-84; T-tests on commitment and job satisfaction Generation X and Baby Boomers below

Group Statistics

Commitment and job satisfaction	Age	N	Mean	Std. Deviation	Std. Error Mean
Affective commitment	2	119	3.10	.906	.083
	3	74	2.57	1.00	.116
Continuance commitment	2	119	3.19	.936	.085
	3	74	2.41	.958	.111
Normative commitment	2	119	3.16	.856	.078
	3	74	2.72	.901	.105
Job Satisfaction	2	119	2.83	.618	.057
	3	74	3.17	.464	.054

On average, Generation X have higher affective commitment (M=3.10; SE=.083) than Baby Boomers (M=2.57; SE=.116). This difference was significant (t=3.813, p<.05). Generation X also had higher continuance commitment (M=3.19; SE=.085) than Baby Boomers (M=2.41: SE=.111. The difference was significant (t=5.609; p<05). The average for normative commitment was also higher for Generation X (M=3.16; SE=.078) than Baby Boomers (M=2.72; SE=.105). This difference was significant (t=3.452; p<.05). Job satisfaction however, was higher for Baby Boomers (M=3.17; SE=.054) than Generation X (M=2.83: SE=.057). The difference was also significant (t=-4.150; p<.05). The results indicate that significant differences exist between Generation X and Baby Boomers.

Table 4-85 T-tests on commitment and job satisfaction, Baby Boomers and Generation X below

Organisational commitment and job satisfaction		Levene's Test for Equality of Variances					
		F	Sig.	t	Sig. (2-tailed)	95% Confidence Interval of the Difference	
						Lower	Upper
Affective Commitment	Equal variances assumed	.609	.436	3.813	.000***	.2571	.8082
	Equal variances not assumed			3.725	.000***	.2500	.8153
Continuance Commitment	Equal variances assumed	.394	.531	5.609	.000***	.5085	1.060
	Equal variances not assumed			5.578	.000***	.5066	1.062
Normative Commitment	Equal variances assumed	.219	.640	3.452	.001**	.191	.701
	Equal variances not assumed			3.410	.001**	.188	.705
Job Satisfaction	Equal variances assumed	7.054	.009	-4.150	.000***	-.511	-.182
	Equal variances not assumed			-4.430	.000***	-.501	-.192

Table 4-85 shows that there are significant differences in organisational commitment and job satisfaction between Generation X and Baby Boomers.

4.8.0 Conclusion

The results of the tests carried out in the study were expressed in this chapter. The main research question tested generational membership have an influence on sources of motivation, work values, organisational commitment and job satisfaction in employees working for corporate companies in the Gauteng region of South Africa? In terms of the hypotheses tested, there appears to be significant differences between the generations. The results reported in this chapter are discussed in the following chapter.

4.8.1 Summary of hypothesis testing

Four variables were used in this study to investigate whether age (representing cohort membership) had an association each of the four variables, namely motivation (with five dimensions), work values (also with five dimensions), organisational commitment (with three dimensions) and job satisfaction. Below is a summary of the hypotheses.

Table 4-86 Summary of hypotheses.

Hypothesis :Independent variable	Dependant variable	Significant/Not Significant
There is no significant association between age and sources of motivation.	Intrinsic motivation	Significant
	Extrinsic motivation	Not significant
	Internal self-motivation	Not significant
	External self-motivation	Significant
	Goal internalisation	Significant
There is no significant association between age and work values.	Intrinsic work values	Not significant
	Extrinsic work values	Significant
	Altruistic work values	Significant
	Prestige work values	Significant
	Social work values	Significant
There is no significant association between age and organisational commitment.	Affective commitment	Significant
	Continuance commitment	Significant
	Normative commitment	Significant
There is no significant association between age and job satisfaction.	Job satisfaction	Significant
There is no significant association between intrinsic motivation and commitment	Affective	Not significant
	Continuance	Not significant
	Normative	Significant
There is no significant association between extrinsic motivation and commitment	Affective	Not significant
	Continuance	Not significant
	Normative	Not significant
There is no significant	Affective	Not significant

association between internal self- motivation and commitment	Continuance	Not significant
	Normative	Not significant
There is no significant association between external self- motivation and commitment	Affective	Significant
	Continuance	Not significant
	Normative	Not significant
There is no significant association between goal internalisation motivation and commitment	Affective	Significant
	Continuance	Significant
	Normative	Significant
There is no significant association between intrinsic motivation and job satisfaction	Job satisfaction	Not significant
There is no significant association between extrinsic motivation and job satisfaction	Job satisfaction	Not significant
There is no significant association between internal self- motivation and job satisfaction	Job satisfaction	Not significant
There is no significant association between external self- motivation and job satisfaction	Job satisfaction	Not significant
There is no significant association between goal internalisation motivation and job satisfaction	Job satisfaction	Significant
There is no significant association between intrinsic work values and organisational commitment.	Affective	Not significant
	Continuance	Not significant
	Normative	Not significant
There is no significant association between extrinsic work values and organisational commitment	Affective	
	Continuance	
	Normative	Not significant
There is no significant association between prestige work values and	Affective	
	Continuance	Not significant

organisational commitment	Normative	Significant
There is no significant association between altruistic work values and organisational commitment	Affective	Significant
	Continuance	Significant
	Normative	Significant
There is no significant association between social work values and organisational commitment	Affective	Not significant
	Continuance	Significant
	Normative	Not significant
There is no significant association between intrinsic work values and job satisfaction.	Job satisfaction	Not significant
There is no significant association between extrinsic work values and job satisfaction	Job satisfaction	Not significant
There is no significant association between prestige work values and job satisfaction	Job satisfaction	Significant
There is no significant association between altruistic work values and job satisfaction	Job satisfaction	Significant
There is no significant association between social work values and job satisfaction	Job satisfaction	Not significant

4.8.2 Summary of the chapter

Tables, figures and other illustrations were set out in this chapter followed by a description of the results. Statistical models were also displayed in this chapter and the interpretation of these results. A discussion of the above results follows below.

CHAPTER 5

DISCUSSION OF RESULTS AND PRACTICAL IMPLICATIONS

5.1.0. Introduction

The aim of the study was to build on previous research in understanding the influence of cohort membership on sources of motivation, work values, organisational commitment and job satisfaction. The primary research question was whether there are statistically significant associations between sources of motivation, work values, organisational commitment and job satisfaction among the three generations found within the South African workforce today. This chapter outlines the main findings of the empirical study and interprets them in light of key concepts drawn from the literature review.

5.1.1 Characteristics of the Sample

The participants were made up of 146 males and 162 females which translate to 48% and 52% respectively. The generations were represented by the following: Baby Boomers- 74, Generation X, - 119 and Generation Y- 115. The participant population consisted of employees working for corporate companies in the Gauteng Region of South Africa, particularly those which participate in career exhibitions at The University of the Witwatersrand and have e-mail addresses available at the CCDU. The generalisability of the results may therefore be questioned and this is acknowledged under the limitations of the study.

5.2.0 CORRELATION ANALYSIS AND T-TESTS RESULTS

5.2.1 Cohort membership and motivation

To discover whether age (which was used as a proxy for cohort membership) predicted each of the five dimensions of sources of motivation, simple correlation was performed. Pearson's product moment indicated that each of the five dimensions of sources of motivation was statistically, correlated with age. Wong et al (2008) used the Motivation Questionnaire to examine whether personality and motivational drivers exist across three generations of working Australians and found small differences in the degree to which the three generations were motivated.

In Wong's (2008) study Generation X and Y were found to be more motivated by progression than Baby Boomers. Baby Boomers were on the other hand found to be more motivated by power than Generation X and Y.

Simple correlation used in the present study found significant associations between age and the five sources of motivation, namely, intrinsic motivation, extrinsic motivation, internal self-motivation, external self-motivation and goal internalisation. The present study therefore supports Wong et al's (2008) study in that significant differences were found across generations. Appelbaun et al. (2005) investigated the factors that are supposed to motivate Baby Boomers and Generation X and found that both generations ranked a high salary and stable and secure future as the most important. T-tests carried out in this study show that Baby Boomers have higher intrinsic as well as extrinsic motivation than Generation X. Appelbaun's (2005) study was therefore not fully supported by the present study which found significant differences between Baby Boomers and Generation X on extrinsic motivation. The results of this study suggest that Baby Boomers are motivated by such things as money and benefits more than the younger generations. When examined in light of the looming retirement that the Baby Boomers are likely to be facing, this is understandable. Baby Boomers may be preparing for retirement, therefore will rank extrinsic rewards as important.

Jurkiewicz (2000) conducted a study of 241 employees from five municipalities in the USA on generational differences in motivation among public sector employees and found that Baby Boomers rated a chance to learn new things (intrinsic) higher than generation X and Generation X ranked freedom from supervision significantly higher than Baby Boomers. The present study found that Baby Boomers had higher intrinsic motivation than the younger generations and this supports Jurkiewicz's (2000) findings. The present study therefore partly supports previous studies on the association between cohort membership and sources of motivation. Although previous studies were carried out in different contexts, there are areas of agreement between the present study and research carried out elsewhere.

5.2.2 Cohort membership and work values

Correlation analysis was carried out to investigate the association between cohort membership and work values and the results indicated an association between age and four out of five dimensions of work values. Twenge et al (2010) conducted a national study of a representative sample of US high school seniors in 1976, 1991 and 2006 (N=16507) on generational differences and work values and found that extrinsic work values were higher for Generation X than For Baby Boomers.

T-tests carried out in the present study indicated that Generation X had higher extrinsic work values than Baby Boomers. However the difference was not significant. This study therefore partly confirms the findings by Twenge et al. (2010). Cenamo and Gardner (2008) carried out a study on employees in eight organisations in New Zealand and found that the youngest groups placed more importance on status and freedom work values than older employees. In the present study T-tests indicated that Generation Y had higher prestige work values (M=2.47) than Baby Boomers (M=1.81) and Generation X (M=1.94). Generation Y also had higher altruistic work values (M=2.23) than Baby Boomers (M=1.67) and Generation X (M=1.96). This study therefore confirms the findings of Cenamo and Gardner's (2008) study. Younger workers in South Africa seem to like work that gives them status and this is consistent with Cenamo and Gardner's (2008) study. Lancaster and Stillman (2002) have suggested that Generation Y define success largely in materialistic terms and that they are particularly interested in status and prestige in their careers.

5.3.0 Regression analysis and T-tests.

5.3.1 Cohort membership and motivation (Hypothesis 1)

Sources of motivation were measured using five dimensions namely intrinsic motivation, extrinsic motivation, internal self-motivation, external self-motivation and goal internalisation. Barbuto and Miller (2008) carried out a study on 382 staff members of not-for profit organisations throughout the Midwestern USA using the same dimension of sources of motivation and found significant differences between Generation X and Baby Boomers on extrinsic motivation and goal internalisation motivation but found no significant differences on intrinsic motivation, internal self-motivation and external self-motivation.

T-tests carried out in the present study indicated that Baby Boomers had higher and significant differences on intrinsic and extrinsic motivation than Generation X and Generation X had higher and significant goal internalisation motivation than Baby Boomers. The results therefore, partly confirm Barbuto and Miller's (2008) findings.

Regression analysis carried out in the present study show that for intrinsic motivation, after controlling for variables such as tenure, race, gender, education and health, age accounts for 5% of intrinsic motivation which is significant. However there was no significant association between age (cohort membership) and extrinsic motivation. This finding partly confirms Barbuto and Miller's (2008) study which found significant associations between cohort membership and extrinsic motivation. In regression analysis, goal internalisation was found to be significantly associated with cohort membership and this finding also supports Barbuto and Miller's (2008) study. In spite of the differences in context between the present study and studies carried out outside Africa, there is some common ground in some findings relating to cohort membership and motivation.

Westerman and Yamamura (2006), carried out a study on generational preferences for work fit, and the results indicated the importance of goal orientation, and systems work fit for the younger generations. Westerman and Yamamura's (2006) sample consisted of accountants in a Western state of the USA. In the present study, T-tests indicated that goal internalisation was higher for Generation X (M=2.56; SE=.086) than Baby Boomers (M=2.27; SE=.103). Goal internalisation was also higher for Generation Y (M=2.85; SE=.098) than Baby Boomers (M=2.27; SE=.103). The differences were both significant ($t=3.947$; $p<.05$) and ($t=2.123$; $p<.05$) respectively. These results of the present study support Westerman and Yamamura's (2006) study. The results suggest that when younger workers have internalised the goals of the organisation, they will be highly motivated.

Jurkiewicz (2000) found that Baby Boomers place a higher value on work itself than generation X. The present study found that Baby Boomers have higher intrinsic motivation (M=3.06; SE=.091) than Generation Y (M=2.21; SE=.075). Baby Boomers also had higher intrinsic work values (M=1.74; SE=.056) than Generation Y (M=1.51; SE .041).

The present study also found that Baby Boomers have higher intrinsic motivation (M=3.06; SE=.091) than Generation X (M=2.62; SE=.091). This difference was significant (t=-3.567, p<.05).

Baby Boomers had higher intrinsic work values (M=1.74; SE=.056) than Generation X (M=1.55; SE .053). The difference was significant (t=-2.405; p>.05). The present findings therefore support Jurkiewicz's (2000) findings. Older workers have higher intrinsic work values and motivation than younger workers.

5.3.2 Cohort membership and work values (Hypothesis 2)

Regression analysis was used to identify the best predictors for work values. Six independent predictors were entered for the five dimensions of work values. After controlling for variables such as gender, education, tenure, race and health, age (cohort membership) explained 1% of variation in intrinsic work values, 1% variation in extrinsic work values, 1% variation in prestige work values, 4% variation in altruistic work values and 3% variation in social work values. Lyons et al., 2005) carried out a study on generational differences and work values on a sample made of Canadian knowledge workers and university students and the results indicated that work values varied significantly by generation. Lyons et al's. (2005) study indicated that the four generations differed on four of the five work values: intrinsic work values, altruistic work values, prestige work values and social work values. In the present study correlation analysis produced results which were largely consistent with Lyons et al's (2005) study. The T tests carried out in the study confirmed the Lyons et al' (2005) study since significant differences were found in four out of five dimensions of work values between Generation X and Baby Boomers. The differences were significant for all the five dimensions of work values between Baby Boomers and Generation Y. The differences appear to be more marked as the age gap increases.

Cherrington, Condie and England (1979) conducted a survey made of 3053 workers in 53 companies throughout the United States and found that older workers placed greater importance on the moral importance of work and pride in craftsmanship and younger workers placed greater importance on money and friends. In the present study multiple linear regression indicated that the contribution of age over and above the other covariates was significant for all the five dimensions of work values.

The results oft-test showed that the three generations have significant differences in work values, which is consistent with studies carried out elsewhere.

The results suggest that the differences are more marked as the age gap widens. The youngest generation and oldest seem to have very little in common in terms of work values but Generation X and Y have areas of commonality as well as Baby Boomers and Generation X. The present study therefore confirms the findings of Cherrington, Condie and England (1979).

Cenamo and Gardner (2008) carried out another study on Canadian workers and found significant generational differences for work values involving status and freedom but not for extrinsic, social and altruism-related values. Cenamo and Gardner's (2008) study found that the younger generations placed greater importance on status than Baby Boomers. The above findings partly confirm the results of the present study where significant differences were found for extrinsic, altruistic and prestige work values between Generation X and Y. Significant differences were found between Baby Boomers and Generation Y in all dimensions of work values in the t-tests that were carried out in the present study. Lancaster and Stillman (2002) have suggested that Generation Y define success largely in materialistic terms and that they are particularly interested in status and prestige in their careers. However, in the present study, there were no significant differences for extrinsic work values between Baby Boomers and Generation X.

Gursory et al. (2008) carried out a study on generational differences and work values and found differences in world views, attitudes towards authority and perspectives on work. The study was carried out on employees of a North American branded hotel chain and found that the older generation respected authority and hierarchy while Generation X rebelled against authority. Baby Boomers were found to be loyal and patient and Generation X wanted immediate recognition through praise. The present study found significant differences between Baby Boomers and Generation X in all dimensions of work values.

Chen and Choi (2008) used a cross-sectional survey of 398 managers and supervisors from hospitality organisations in the USA to examine generational differences in work values and found that Baby Boomers scored higher on altruism and intellectual stimulation, and Generation X scored higher on security and independence.

The dimension of altruism was measured in the present study and the results were significant across all generations, thus confirming the results found by Chen and Choi (2008).

Twenge et al. (2010) carried out national study of US high school seniors on generational differences in work attitudes and found that Generation X and Y valued extrinsic work values more than Baby Boomers. The present study found no significant differences for extrinsic work values between Baby Boomers and Generation X which contradicts Twenge et al's (2010) findings. Hornblower's (1997) study found Baby Boomers to score higher on friendly and warm relationships with core workers than the younger generations, and this is again confirmed in the present study where social work value differences were significant between Baby Boomers and the younger generations.

Smolla and Sutton's (2002) carried out a longitudinal study on workers in the Southern region of the United States and found significant differences between Baby Boomers and Generation X, with the younger group reporting a stronger desire to be promoted more quickly. The study also found significant differences between Baby Boomers and Generation X on the moral importance of work construct. The present study confirmed Smolla and Sutton's (2002) study, with results showing significant differences in work values between Generation Y and Baby Boomers and Baby Boomers and Generation Y. Although the studies cited above were carried out in different contexts, common ground was found between the results of the present study and those of previous studies. A discussion of cohort membership and organisational commitment follows below.

5.3.3 Cohort membership and organisational commitment (Hypothesis 3)

Regression analysis was carried out on organisational commitment to identify the best predictors of organisational commitment. After controlling for gender, education, health, race and tenure age explained 5% of affective commitment over and above the other covariates, 5% of continuance commitment and 1 % of normative commitment.

These results were significant. T-tests carried out in the present study also found significant differences in all aspects of organisational commitment across all the three generations.

Previous research on age and organisational commitment has largely found a positive relationship between age and commitment in different cultures. Lincon and Kalleberg (1985) carried out studies on employees in manufacturing organisations in Japan and the USA and found that older workers were more committed and satisfied than younger workers.

Allen and Meyer (1993) carried out a study on American workers and found that both affective and normative commitment were significantly higher in older workers than younger workers. Sommer, Bae, and Luthans (1996) carried out a study on Korean workers and found that older workers reported higher commitment than younger workers. Nordin, Rahim, Ibrahim and Omar (2011) conducted a study on Malaysian workers to find out the relationship between career stages and organisational commitment and found that older workers were more committed than younger workers. T-tests results for the present study revealed surprising findings. Generation Y had higher means for commitment than both generation X and Y. Generation X also had higher means commitment than Baby Boomers. These findings are contrary to the studies cited above. The explanation might be linked to the state of the economy and the unavailability of jobs for younger people with little or no experience. The younger workers may be finding it difficult to find alternative employment. The results from previous studies suggest that the older workers have higher organisational commitment than the younger workers. The reason might be linked to tenure and the fact that older workers may have been promoted over the years which results in high affective and continuance commitment (Janson & Martin, 1982).

Allen and Meyer (1993) suggest that positive correlations between age and commitment might exist because (1) something about aging makes older employees to be more committed to organisations ("maturity"), (2) older employees actually have, or perceive themselves to have, more positive experiences in organisations than younger employees ("better experiences"), and (3) there are generational differences in organisational commitment ("cohort"). The findings for organisational commitment in the present study are not consistent with this theory. A discussion of the relationship between cohort membership and job satisfaction follows below.

5.3.4 Cohort membership and job satisfaction (Hypothesis 4).

Employee age was found to bear a U-shaped relationship with job satisfaction by Herzberg et al., (1957). Job satisfaction was found to be high when individuals started their first jobs but later declined until people reached their late twenties or early thirties when it began to rise for the rest of their careers (Hunt & Soul, 1975). Hunt and Soul, (1975) carried out a study on Australian workers and found a positive and linear relationship between age and job satisfaction.

Kalleberg and Loscocco (1983) carried out a study using data from the 1972-1973 Quality of Employment Survey in the USA and found that age was positively related to job satisfaction and the findings are consistent with cohort membership theory. Extant literature suggests that older workers are likely to have been promoted in their jobs or have accepted their lot in life such that they are more likely to be satisfied with their jobs than the younger workers (Janson & Martin, 1982).

Westerman and Yamamura (2006) carried out a study on generational differences in job satisfaction of Accountants in the United States of America and found that Baby Boomers were more satisfied with their jobs than the younger generation. Correlation analysis carried out in the present study revealed a positive relationship between age (cohort membership) and job satisfaction ($r=.402^{***}$) which supports findings of previous studies. Results of t -tests show that Baby Boomers have higher job satisfaction than both generation X and Y and that Generation X has higher job satisfaction than Generation Y. The present study therefore supports previous studies that suggest a positive association between age and job satisfaction. A discussion of the association between motivation and organisational commitment follows below.

5.3.5 Motivation and organisational commitment (Hypothesis 5)

Regression analysis carried out to investigate the association between sources of motivation and organisational commitment yielded largely no significant association between the five sources of motivation and the three dimensions of organisational commitment. In analysing the association between the five sources of motivation and affective commitment, only external self-motivation and goal internalisation yielded significant results.

The null hypothesis that there is no association between sources of motivation and organisational commitment could not be rejected. Eby, et al. (1999) carried out a study on motivation and organisational commitment and found a significant and direct link between motivation and affective commitment as well as general job satisfaction. Intrinsic motivation was found to be the central variable in explaining affective commitment and general job satisfaction by providing individuals with the affirmation that their efforts are worthwhile and valued, and this leads to affective commitment and job satisfaction (Eby, et al 1999).The present study though found no significant association between intrinsic motivation and affective commitment but there was an association between intrinsic motivation and normative commitment.

Warsi, S., Fatima, N., and Sahibzada, S (2009) carried a study on Pakistan private sector employees and found that motivation and organisational commitment were positively related. Regression analysis carried out in the present study showed that goal internalisation motivation has a significant influence all the three factors of organisational commitment. External self-motivation has a significant influence on affective commitment only. The results of the present study therefore contradict the findings by Eby et al. (1999) that intrinsic motivation is central in explaining organisational commitment. In the present study, goal internalisation appears to be central in explaining the three dimensions of organisational commitment. The South African context appears to produce different results from other contexts in that goal internalisation appears to be central in explaining organisational commitment and not intrinsic motivation. Below is a discussion of the relationship between motivation and job satisfaction.

5.3.6 Motivation and job satisfaction (Hypothesis 6)

Herzberg et al. (1959) proposed that an employee's motivation to work would be best understood if the employee's internal attitude is understood. Bishay (1996) conducted a study on levels of job satisfaction and motivation in a sample of 50 teachers in the USA and found that job satisfaction and motivation correlated significantly with responsibility levels, gender, subject, age, and years of teaching experience. For the group of teachers who work in a school with a selective student body, overall motivation and job satisfaction levels were high (Bishay 1996).

In the present study, regression analysis results indicate that only goal internalisation has significant association with job satisfaction. All other sources of motivation showed no significant association with job satisfaction. These results indicate that employees who internalise the goals of the organisation they work for are more likely to have high job satisfaction than those who do not. This is in line with Locke and Latham's (2006) goal-setting theory. Below is an analysis of the relationship between work values and organisational commitment.

5.3.7 Work values and organisational commitment (Hypothesis 7)

Multiple linear regression analysis carried out in this study on the association between work values and organisational commitment showed a significant association between work values and organisational commitment. Elizur and Koslosky (2001) used data collected from 204 students in the USA to investigate the relationship between work values and organisational commitment, and moderated regression analysis showed that work values, especially cognitive ones, are positively related with commitment. The present study therefore supports Elizur and Koslosky's (2001) study.

Putti, Aryees and Liang (1989) investigated the association between work values and organisational commitment in an Asian context and the results suggested that intrinsic work values relate more closely to organisational commitment than either the global measure of work values or extrinsic work values. The present study partly supports these findings as intrinsic work values were significant for affective and continuance commitment. Xiao and Froese (2008) investigated the relationships between various facets of work values and job satisfaction, and organisational commitment among white-collar workers employed in foreign invested companies in China and found that work values are related to various facets of job satisfaction, which in turn influence employees' commitment to the organisation.

Chih Ho, Oldenburg, Day, and Sun (2012) conducted a study to investigate the relationship between work values, job involvement and organisational commitment in a sample of 1047 Taiwanese nurses and the results indicated that work values were positively related to job involvement and organisational commitment. Dahlia (2003) carried out a study to identify the relationship between work values, organisational commitment and job performance among managers in Malaysia.

The analyses of data revealed significant relationships between work values and organisational commitment and work values and job performance. The present study therefore supports studies carried out elsewhere.

5.3.8 Work values and job satisfaction (Hypothesis 8).

Work values affect job satisfaction because they influence the congruence between what workers want from their jobs and the rewards that their jobs provide (Rhodes, 1983). Hegney, Plank and Parker (2006) conducted a study on Australian nurses to investigate the impact of extrinsic and intrinsic work values on job satisfaction and found that both intrinsic and extrinsic work values do in fact impact on job satisfaction. The present study though found no significant association between intrinsic, extrinsic work values and job satisfaction but found significant associations between altruistic, prestige, social and job satisfaction.

Kalleberg (1977) used data obtained from the 1972-1973 Quality of Employment Survey in the USA to develop a theory of job satisfaction which incorporates differences in work values and perceived job characteristics as key explanatory variables. Knoop R (1993) carried out a study on educators in Canadian schools to investigate the relationship between work values and job satisfaction and the results supported and extended Herzberg's hygiene theory. Satisfiers (achievement, recognition the work itself and responsibility) loaded clearly on the intrinsic dimensions of job satisfaction. The present study found that work values have independent effects on job satisfaction. The present study also found significant associations between altruistic, prestige, social and job satisfaction therefore, partly supports the findings of other researches carried out elsewhere. Having discussed the findings of the present study in relation to other studies, below is a discussion of the implications of the study in the field of human resources.

5.4.0 IMPLICATIONS FOR HUMAN RESOURCES MANAGEMENT

5.4.1 Recruitment and selection

Recruitment is essential for the success of organisations because it enables organisations to attract and keep human capital while developing the skills of the work force. Over recent years, considerable attention has been paid within the national and international media to the problems inherent in a diverse workforce. The domination of the younger population in developing countries such as South Africa means that their lack of experience needs to be complemented by older workers. Exacerbating this problem is the fact that some Baby Boomers have now reached retirement age, taking with them the skills and experience that many organisations rely on.

Recruitment for now does not mean only recruiting from Generations X and Y because employers may need to target jobseekers with the skills and experience possessed primarily by Baby Boomers (Crumpacker & Crumpacker, 2007). It is therefore important that employers find ways to effectively attract talent from Generations X and Y while keeping the Baby Boomers, to make sure that organisations remain competitive and successful, (Parry & Urwin, 2009). The results of the present study suggest that in terms of motivation, the oldest generation, (Baby Boomers) are more intrinsically and extrinsically motivated than the younger generations. Employers would therefore do well to emphasise aspects of the job such as autonomy when hoping to attract the youngest generation and a high salary when hoping to attract older workers. Baby Boomers had the highest mean for extrinsic motivation, so an emphasis on pay and benefits might attract Baby Boomers.

Parry and Urwin (2009) suggest that there are two considerations when thinking about how best to attract job-seekers from the different generations. The first is to identify recruitment channels that have the best ability to reach the generations being targeted. The second is to create an employer brand or to publicise benefits that will appeal to different generations. By combining these two factors, employers can effectively attract the talent they need into their organisation (Parry & Urwin, 2009).

5.4.2 Recruitment channels

People of different generations have distinct habits in the ways that they look for work and the media that they use to find job vacancies (Parry & Urwin, 2009). Baby Boomers will historically have searched for jobs by looking at advertisements in print media such as national and local newspapers and professional magazines and industry press. They might also use employment agencies. The younger generations are however technologically savvy and would prefer social media. The more technologically savvy Generations X and Y are more likely to use electronic media, such as job search engines like Google and Linked in (Parry & Urwin, 2009). It is therefore important for employers to identify the correct recruitment channels when targeting potential employees from different generation.

5.4.3 Training and development

Previous studies have suggested that older workers are one of the groups least likely to be trained by employers (CIPD, 2003). A commonly cited reason for this observation within the literature (Redman & Snape, 2002; Taylor & Walker, 2003) is the negative attitude of managers towards senior workers when training is considered. However, empirical studies suggest that, while older workers are less likely to be offered vocational training, there is also evidence that they are unlikely to take up the opportunity when training is offered (Taylor & Urwin, 2001). The present study shows that Baby Boomers have higher intrinsic motivation than younger generations. In the South African set up employers would be better advised to include older workers in their training programmes, especially when taking into account the results of the present study that suggest that older workers have higher intrinsic motivation than younger workers but have the lowest means on organisational commitment. Organisations would thus be able to retain skills developed through training and development of older workers.

5.4.4 Career development

The proposed differences between generations, especially Generation X and Baby Boomers, are felt to be most distinct in relation to their attitudes towards careers, (Parry & Urwin, 2009). This is an area that has been the subject of much discussion among practicing managers and academics.

Baby Boomers were brought up to believe that a job was for life and therefore, generally will have had a maximum of around four jobs within their lifetime (Berl, 2006). Conventionally Baby Boomers tend to stay with one organisation for a long time, perhaps even their entire career. The results of the present study however present Baby Boomers as having the least means on organisational commitment.

In those contexts where older workers are more committed than younger workers, their unwritten employment contract (psychological contract) states that if they work hard, are loyal and do as they are told, they will be rewarded with secure jobs, steady pay increases and financial security (Ansoorian et al., 2003). The results of the present study do not support this view. Baby Boomers have the lowest mean for the three dimensions of organisational commitment and the youngest generation had the highest mean. Literature suggests that workers from Generation X tend to change jobs regularly as a result of having seen their parents' loyalty being rewarded with retrenchments (Parry & Urwin, 2009, p. 26).

Generation X tends to hop from job to job and have one eye in the company and one eye looking outside all the time (Filipczak, 1994). They expect promotions or at least lateral moves frequently because they get bored quickly and will want to move on, either within the same company or to another (Parry & Urwin, 2009, p. 26). Because Generation X workers have not experienced job security, they see jobs as stepping stones to something else. Individuals from Generation X are seen as loyal only to themselves, their personal goals and professions (Parry & Urwin, 2009, p. 26). The present study does not support extant literature with regards to the organisational commitment of the younger generations.

5.4.5 Performance management

Generations also have different expectations in terms of how they are treated in performance management. It is also important to publicly acknowledge and reward Baby Boomer work ethic, and the long hours they spend at work (Berl, 2006). Parry and Urwin (2009, p. 26) state that when addressing performance concerns with Baby Boomers, peer feedback should be used to improve performance as they value peer opinion. The results of the present study indicate that Baby Boomers have the highest mean on social work values which supports the view that Baby Boomers prefer peer feedback.

5.4.6 Rewards Management

It has been suggested that the different generations place varied degrees of value on different rewards although money is an important motivator of all four generations, (Parry & Urwin, 2009, p. 27). Baby Boomers value recognition in the form of salary increases, while Generation X is presumed to value money for its own sake because this generation grew up during depressed economic times (Corley, 1999). It has been suggested that employees from Generation Y want competitive salaries, diversity in projects, good benefits, learning opportunities paid for by the company, travel opportunities and flexible work hours (Parry & Urwin, 2009, p. 27). Baby Boomers are generally more focused on materialistic pursuits, while Generation X is focused on peace of mind and leisure time (Parry & Urwin, 2009, p. 27).Generation X is also driven by non-financial rewards such as receiving personal credit for tangible results, increased responsibility, and opportunities for innovation and exposure to the decision-making process (Parry & Urwin, 2009, p. 27).

The results of the present study support the above. Baby Boomers had the highest mean for both intrinsic and extrinsic motivation as well as the highest mean for extrinsic work values. Rewards therefore need to be structured in such a way that they cater for the different preferences of the generations.

5.4.7 Management style and leadership

Preference for management style and leadership has been cited as one of the areas of differences between generations (Parry & Urwin, 2009). The generalisation is that different values and characteristics of Baby Boomers, Generation X and Generation Y mean that they respond differently to disparate leadership style (Parry & Urwin, 2009, p. 31). If this is the case, then it is important that employers realise this and alter their management style accordingly if they are to effectively retain and motivate employees from across generations (Parry & Urwin, 2009, p. 31). The results of the present study suggest that Generation Y places higher importance to prestige and status and a management style that recognise this trait would gain greater commitment from this generation.

Generation X employees want managers to take responsibility for things and be democratic (Filipczak, 1994. It is suggested that Generation X prefers not to be managed (Parry & Urwin, 2009).). Individuals from Generation X do not subscribe to the concept of micro managing but like informality and have a more casual approach to authority, and formal hierarchies may be meaningless to them (Parry & Urwin, 2009, p. 31). To motivate Generation X employees, managers need to reward innovation (Parry & Urwin, 2009, p. 32).

Generation Y on the other hand likes having fun at work; therefore, those managing this cohort should emphasise the fun side of the workplace and provide a variety of activities that the employee can enjoy (Parry & Urwin, 2009, p. 32). Generation Y should be provided with opportunities for socialising and networking with colleagues since they still require mentoring (Filipczak, 1994). The best way to communicate with Generation Y is through technology (Parry & Urwin, 2009). The results of the present study partly support this view as the youngest generation was found to have the highest mean for altruistic and prestige work values.

5.4.8 Attitudes towards work

According to Tolbize (2009, p. 5) the perceived decline in work ethic is perhaps one of the main causes of generational conflicts in the workplace. Generation X for instance, has been labelled the 'slacker' generation (Jenkins, 2007), and employers generally complain that younger workers are uncommitted to their jobs and work only the required hours. Indeed, the popular stereotype is that younger workers do not work as hard as older workers do (Tolbize, 2009, p. 5). In the present study the highest means for all the three dimensions of commitment were for Generation Y which contradicts previous findings. The younger workers appear to be more committed to their organisations than older workers, at least according to the present study. However, Baby Boomers had the highest mean for job satisfaction, followed by Generation X.

5.4.9 Loyalty towards the employer

While Boomers have been characterised as being extremely loyal to their employers, the lack of loyalty of younger workers, particularly Generation X has been noted (Tolbize, 2009, p. 6). Generation X has been hypothesised to value their relationship with their co-workers above the relationship with their company (loyalty to core workers), particularly if this co-worker is a friend (Karp, et al., 2002), and that Generation X will see nothing wrong with giving the employer two-week' notice. Generation X may even view job-hopping as an acceptable career advancement method (Bova & Kroth, 2001).

Loyalty towards employers has indeed been found to increase with age (Tolbize, 2009). The younger the generation, the least loyal the generation is likely to be. For instance, a study carried out by Deal (2007) revealed that about 65% of Baby Boomers reported that they would like to stay with their current organisation for the rest of their working life compared with 40% of X, and 20% of Y. However, such a finding may make obvious sense, given that humans tend to prefer the familiar and seek stability as they grow older (Tolbize, 2009).

Smola and Sutton (2002) also found younger employees to be less loyal to their company and more 'me' oriented. Younger workers wanted to be promoted more quickly than older workers, were less likely to feel that work should be an important part of their lives and reported higher intention of quitting their job if they were offered more money elsewhere (Smola & Sutton, 2002).

Related to loyalty is the construct of organisational commitment. In the present study Generation Y had the highest means for all the three dimensions of organisational commitment. This is a surprising finding as it contradicts studies carried out elsewhere. If the results of the present study can be generalised into the South African workforce, then there is light at the end of the tunnel as these younger workers who are more committed will soon dominate the workforce.

Deal (2007) warns that the perception of loyalty may be context contingent. Firstly, the frequency with which individuals change jobs may also be related to the economy, as people are more likely to change jobs if the economy is performing well, and opportunities are numerous (Deal, (2007. Secondly, younger workers typically hold several jobs while still studying, but tend to stabilise with one employer as they get older (Tolbize, 2009). Therefore, loyalty may be more related to age or other circumstances than a generational characteristic (Deal, 2007).

5.4.10 Attitudes regarding respect and authority

The general stereotype is that Generation X complains about managers who ignore ideas from employees, and exhibit undemocratic management style (O'Bannon, 2001). Younger workers complain that there is a lack of respect towards them in the workplace and older workers also complain about the attitudes of younger and newer employees toward management (O'Bannon, 2001).

Younger workers, like their older counterparts, want to be respected, although the understanding of respect among older and younger workers is probably different (Tolbize, 2009). Older workers want their opinions to be taken more seriously because of their experience, while younger workers want to be listened to (Tolbize, 2009). Furthermore, older people may not appreciate equal respect showed to all, and may want to be treated with more respect than those at the lower level in the hierarchy or with less experience (Deal, 2007).
Meeting the expectations of respect of these generations may be a genuine challenge in the workplace. Results from t-test carried out across the three generations in the present study show that Generation Y attaches more importance to prestige work values than the other generations. This indicates that they may prefer to be promoted more quickly and have influence over others.

The above section dealt with the practical implications of the differences identified across generations. Managers need to identify what the different generations want and if possible provide for it. However, it must be pointed out that despite these generational differences, workers are individuals who need to be treated as such.

Table 4-87, Results of t-tests comparing the means of the three generations below

Variable	**Findings**
Motivation	**South Africa**
Intrinsic	Baby Boomers>Gen X>Gen Y
Extrinsic	Baby Boomers>Gen X>Gen Y
Internal self-motivation	Gent Y>Gen X>Baby Boomers
External self-motivation	Gent Y>Gen X>Baby Boomers
Goal internalisation	Gent Y>Gen X>Baby Boomers
Work values	
Intrinsic	Gen Y> Gen X >Baby Boomers
Extrinsic	Baby Boomers>Gen X >Gen Y
Prestige	Gen Y> Gen X >Baby Boomers
Altruistic	Gen Y> Gen X >Baby Boomers
Social	Baby Boomers>Gen X >Gen Y
Organisational commitment	
Affective	Gen Y> Gen X >Baby Boomers
Continuance	Gen Y> Gen X >Baby Boomers
Normative	Gen Y> Gen X >Baby Boomers
Job satisfaction	Baby Boomers > Gen X > Gen Y

5.5.0 LIMITATIONS OF THE STUDY

The potential limitations of the study are outlined below.

5.5.1 Generalisability

The first dimension of potential limitation of the study is the possibility that the findings may not be generalised beyond corporate companies within the Gauteng region of South Africa from which the respondents were drawn. The sample size and methodology used to collect the data means that some potential participants were excluded from the sample. This has obvious implications for the generalisability of the findings.

5.5.2 Cross-sectional versus longitudinal research

The problem in most studies on generational differences is that they are cross-sectional in nature. Rhodes (1983), points out that cross-sectional research on generational differences is an insufficient way of examining cohort effects and suggests longitudinal study that is, comparing people of the same age over different time periods. Rhodes (1983) suggests that cross-sectional studies of generational differences may actually produce results that are more in keeping with maturational (age) effect than the generational effect.

5.5.3 Self-selection

Conducting research with volunteers renders the research vulnerable to self-selection bias. Self-selection bias is a major limitation of most surveys (Santon, 1998). In an on-line survey, some individuals are more likely to respond than others, for example younger people are more likely to respond to online surveys than older people, (Santon, 1998). The cause may be the possibility that some personality characteristics may predispose some individuals to volunteer for a particular research than others (Santon, 1998). This can make generalising results problematic.

5.5.4 Generational differences versus age effects

Studies on generational differences encounter methodological difficulties in establishing differences between generational effects and age effects (Wong et al., 2008). It is therefore, not easy to isolate generational differences from age effects. Observed age differences may also result from a life cycle phenomena, changing needs, responsibilities and resources over the course of a person's life cycle (Janson & Martin, 1982).

5.5.5 Causality limitations

Tests carried out on the three generations revealed some significant differences, but it is not possible to imply causality because statistical analysis cannot ascribe causality. What can be implied is an association which does not tell which variable causes these differences. This was taken to be a limitation.

5.5.6 Chapter summary

The above chapter examined the practical implications of generational differences. The general observation is that managers need to be aware of the possible differences and plan for them. Succession planning that takes into account such differences is likely to be successful. Reward management particularly needs to take into account such differences. The chapter also examined the potential limitations of the study. Below is the conclusion and recommendations.

CHAPTER 6

CONCLUSION AND RECOMMENDATIONS.

6.1.0 Introduction

Generational differences have emerged as one of the areas that have been researched upon by modern researchers, mainly because they are thought to influence worker behaviour and attitude (Smola and Sutton 2002). Testing of the relationship between age, sources of motivation, work values organisational commitment and job satisfaction revealed some interesting findings, especially regarding organisational commitment where younger workers, Generation Y were found to be more committed than older workers, Baby Boomers and Generation X. The objectives of this chapter are the following:

- To provide a summary of the research reported and analysed in chapter ***
- To provide a discussion of implications of the results of the analysis of the research
- To discuss issues for further research.

6.1.1 Summary of the research aims and objectives

A quantitative study was undertaken of the association between generational differences as represented by age and four dependent variables namely, sources of motivation, work values, organisational commitment and job satisfaction. The aims of this research were to investigate:

- Whether employee actions, behaviours and attitudes are associated with work values and generational characteristics.
- Whether the five sources of motivation identified by Barbuto and Scholl (1998) are associated with generational differences.
- Whether work values are common across generations.
- The extent to which cohort membership can affect is related to organisational commitment of the workers.
- Whether levels of job satisfaction differ across generations.

- Test theory that predicts a relationship between cohort membership, organisational commitment and job satisfaction.

In terms of the above aims the potential for generational differences to influence behaviour and attitudes were assessed. Through the investigation, insight was provided into how managers can try and mitigate the differences that might exist in the work place and better manage the employees.

The objective of the research was to test theory that relates to cohort membership, sources of motivation, work values, organisational commitment and job satisfaction. The overarching objective was to generate insight into this area, which is an underdeveloped area of study in South Africa and thereby generate recommendations, to assist Human Resources Practitioners in developing policies and practices to improve organisational efficiency and effectiveness.

Summary of the process of hypothesis testing

- Null Hypothesis 1: There is no significant association between age and sources of motivation.
- Alternate Hypothesis 1: There is a significant association between age and sources of motivation.
- Null Hypothesis 2: There is no significant association between age and work values.
- Alternate Hypothesis 2: There is a significant association between age and work values.
- Null Hypothesis 3: There is no significant association between age and organisational commitment.
- Alternate Hypothesis 3: There is a significant association between age and organisational commitment.
- Null Hypothesis 4: There is no significant association between age and job satisfaction.
- Alternate Hypothesis 4: There is a significant association between age and job satisfaction.
- Null Hypothesis 5: There is no significant association between sources of motivation and organisational commitment.

- Alternate Hypothesis 5: There is a significant association between sources of motivation and organisational commitment.
- Null Hypothesis 6: There is no significant association between sources of motivation and job satisfaction.
- Alternate Hypothesis 6: There is a significant association between sources of motivation and job satisfaction.
- Null Hypothesis 7: There is no significant association between work values and organisational commitment.
- Alternate Hypothesis 7: There is a significant association between work values and organisational commitment
- Null Hypothesis 8: There is no significant association between work values and job satisfaction.
- Alternate Hypothesis 8: There is a significant association between work values and job satisfaction

The null hypotheses were broken down into null-sub hypothesis and these were tested. Based upon the testing of the null sub-hypotheses, *** were rejected. The alternative hypotheses were therefore accepted, and significant relationships were found which were largely consistent with studies carried out elsewhere. Insight was therefore provided that enabled an analysis of these significant relationships and the research questions were thus addressed.

6.1.2 Summary of the empirical findings

The present study has established that significant associations exist between the three generations studied; namely Baby Boomers, Generation X and Generation Y. The findings are consistent with earlier studies carried out elsewhere as reported in Chapter 5. Without repeating the discussion on the findings carried out in chapter 5, the specific findings relating to the answering of the research questions are briefly revisited as follows:

Is there a significant association between age and sources of motivation across the three generational groups found within the South African workforce today? Significant differences were found between age an intrinsic motivation, external self-motivation and goal internalisation but no significant differences were found between age and extrinsic motivation and internal self-motivation.

Regression analysis carried out in the present study show that for intrinsic motivation, after controlling for variables such as tenure, race, gender, education and health, age accounts for 5% of intrinsic motivation which is significant. However there was no significant association between age (cohort membership) and extrinsic motivation. This finding partly confirms Barbuto and Miller's (2008) study which found significant associations between cohort membership and extrinsic motivation. In regression analysis, goal internalisation was found to be significantly associated with cohort membership and this finding also supports Barbuto and Miller's (2008) study. In spite of the differences in context between the present study and studies carried out outside Africa, there is some common ground in some findings relating to cohort membership and motivation.

Is there a significant association between age and work values across the three generational groups within the South African workforce today? The present study found significant association between age and extrinsic work values; prestige work values altruistic work values and social work values. However, no significant association was found between age and intrinsic work values. Regression analysis was used to identify the best predictors for work values. Six independent predictors were entered for the five dimensions of work values. After controlling for variables such as gender, education, tenure, race and health, age (cohort membership) explained 1% of variation in intrinsic work values, 1% variation in extrinsic work values, 1% variation in prestige work values, 4% variation in altruistic work values and 3% variation in social work values. Lyons et al., 2005) carried out a study on generational differences and work values on a sample made of Canadian knowledge workers and university students and the results indicated that work values varied significantly by generation. Lyons et al's. (2005) study indicated that the four generations differed on four of the five work values: intrinsic work values, altruistic work values, prestige work values and social work values. In the present study correlation analysis produced results which were largely consistent with Lyons et al's (2005) study.

Is there a significant association between age and organisational commitment across the three generational groups found within the South African workforce today? Regression analysis was carried out on organisational commitment to identify the best predictors of organisational commitment. After controlling for gender, education, health, race and tenure age explained 5% of affective commitment over and above the other covariates, 5% of continuance commitment and 1 % of normative commitment.

Regression analysis was carried out on organisational commitment to identify the best predictors of organisational commitment. After controlling for gender, education, health, race and tenure age explained 5% of affective commitment over and above the other covariates, 5% of continuance commitment and 1 % of normative commitment. These results were significant.. Previous research on age and organisational commitment has largely found a positive relationship between age and commitment in different cultures. Lincon and Kalleberg (1985) carried out studies on employees in manufacturing organisations in Japan and the USA and found that older workers were more committed and satisfied than younger workers. Allen and Meyer (1993) carried out a study on American workers and found that both affective and normative commitment were significantly higher in older workers than younger workers.

Is there a significant association between age and job satisfaction across the three generational groups found within the South African workforce today? Correlation analysis carried out in the present study revealed a positive relationship between age (cohort membership) and job satisfaction ($r=.402^{***}$) which supports findings of previous studies. Results of t -tests show that Baby Boomers have higher job satisfaction than both generation X and Y and that Generation X has higher job satisfaction than Generation Y. The present study therefore supports previous studies that suggest a positive association between age and job satisfaction. Employee age was found to bear a U-shaped relationship with job satisfaction by Herzberg et al., (1957). Job satisfaction was found to be high when individuals started their first jobs but later declined until people reached their late twenties or early thirties when it began to rise for the rest of their careers (Hunt & Soul, 1975). Hunt and Soul, (1975) carried out a study on Australian workers and found a positive and linear relationship between age and job satisfaction. Kalleberg and Loscocco (1983) carried out a study using data from the 1972-1973 Quality of Employment Survey in the USA and found that age was positively related to job satisfaction and the findings are consistent with cohort membership theory.

Is there a significant association between sources of motivation and organisational commitment? Regression analysis carried out to investigate the association between sources of motivation and organisational commitment yielded largely no significant association between the five sources of motivation and the three dimensions of organisational commitment.

In analysing the association between the five sources of motivation and affective commitment, only external self-motivation and goal internalisation yielded significant results.

The null hypothesis that there is no association between sources of motivation and organisational commitment could not be rejected. Eby, et al. (1999) carried out a study on motivation and organisational commitment and found a significant and direct link between motivation and affective commitment as well as general job satisfaction. Intrinsic motivation was found to be the central variable in explaining affective commitment and general job satisfaction by providing individuals with the affirmation that their efforts are worthwhile and valued, and this leads to affective commitment and job satisfaction (Eby, et al 1999).The present study though found no significant association between intrinsic motivation and affective commitment but there was an association between intrinsic motivation and normative commitment.

The results of the present study showed that goal internalisation motivation has a significant influence on all the three factors of organisational commitment. External self-motivation has a significant influence on affective commitment only. The results of the present study therefore contradict the findings by Eby et al. (1999) that intrinsic motivation is central in explaining organisational commitment. In the present study, goal internalisation appears to be central in explaining the three dimensions of organisational commitment.

Is there a significant association between sources of motivation and job satisfaction? In the present study, regression analysis results indicate that only goal internalisation has significant association with job satisfaction. All other sources of motivation showed no significant association with job satisfaction. These results indicate that employees who internalise the goals of the organisation they work for are more likely to have high job satisfaction than those who do not. This is in line with Locke and Latham's (2006) goal-setting theory. Herzberg et al. (1959) proposed that an employee's motivation to work would be best understood if the employee's internal attitude is understood. Bishay (1996) conducted a study on levels of job satisfaction and motivation in a sample of 50 teachers in the USA and found that job satisfaction and motivation correlated significantly with responsibility levels, gender, subject, age, and years of teaching experience. For the group of teachers who work in a school with a selective student body, overall motivation and job satisfaction levels were high (Bishay 1996).

Is there a significant association between work values and organisational commitment? Multiple linear regression analysis carried out in this study on the association between work values and organisational commitment showed a significant association between work values and organisational commitment and this confirmed Elizur and Koslosky's (2001) findings. Putti, Aryees and Liang (1989) investigated the association between work values and organisational commitment in an Asian context and the results suggested that intrinsic work values relate more closely to organisational commitment than either the global measure of work values or extrinsic work values. The present study partly supports these findings as intrinsic work values were significant for affective and continuance commitment.

Is there a significant association work values and job satisfaction? The present study found significant associations between altruistic, prestige, social work values and job satisfaction which supports the findings of other researches carried out elsewhere (Hegney, Plank and Parker 2006; Kalleberg 1977; Knoop R 1993) .Work values affect job satisfaction because they influence the congruence between what workers want from their jobs and the rewards that their jobs provide (Rhodes, 1983).

6.1.3 Implications arising from the research findings and issues for further research

The study has important implications for researchers and Human Resources practitioners. Firstly, cohort membership and age effects warrant further investigation because there is no consensus as to whether the cohort differences are a result of cohort membership or life stages effect. Secondly, while the body of "generational" literature has grown during recent years, it is predominantly Western in orientation, with most of it coming from America or the United Kingdom. There is a need for more studies, which examine specific variables across generational cohorts, to establish with more clarity, whether or not differences really exist, and if they do exist, the extent of those differences, especially outside the West. The study found differences across generations in all the four variables, sources of motivation, work values, organisational commitment and job satisfaction. More studies within the South African context need to be carried out on a larger scale and perhaps using longitudinal studies.

Knowledge would also be enhanced by studies which reproduce earlier studies in a variety of samples, particularly using respondents from different organisational sectors, for example, government versus the private sector, large organisations versus medium or small organisations and in different geographic locations. Rhodes (1983) suggests that as the aging Boomer generation becomes less influential in organisational contexts, human-resource managers would be wise to consider the values and attitudes of Gen X employees who are likely to take over from the Baby Boomers just as the Baby Boomers took over from the Veterans. Studies that focus on the younger generations may therefore be warranted. In South Africa, according to Statistics South Africa (2011), the largest generation is Generation Y, which has just started entering the job market. Because this is the workforce of the future, managers need to have a clearer understanding of what this generation wants from work and how it can be motivated.

Managers must ensure that they understand how to motivate and respond to the disparate needs of the dominant generational cohort in the workplace, while taking into account the needs of employees from other generations (Rhodes 1983). This is important if organisations are to reap maximum performance from their workforce.

The examination of generational differences among workers is a critical and underdeveloped area of inquiry for management research, (Westerman & Yamamura 2006). Failure by managers to understand and adapt appropriately to generational differences and the expectations of new generations entering the workplace can result in misunderstandings (Fyock, 1990), and can affect employee productivity, innovation and corporate citizenship (Kupperschmidt, 2000) ultimately affecting employee retention.

6.1.4Conclusion

This chapter summarised the results of the process of hypothesis testing and also provided a discussion of the implications of the research for theory and practice. Empirical results of the research were related to the research hypothesis. Implications for Human Resource practice and for further research that were derived from the research findings were then made. The overarching conclusion of this research was that generational differences do exist in the South African work context or at least amongst the individuals that comprised the sample.

The principal recommendations were that managers and researchers need to take cognisance of the potential role of generational differences as a constraint to organisational and individual performance, and that further research is required using as wide a sample as possible in order to generate theory that relates to the South African context. It was also concluded that such research into generational differences in work values, organisational commitment and job satisfaction and their influence upon organisational performance would produce a typology that could then be viewed as purely South African. Whether the differences are caused by cohort membership or age effect (life stages), workers from different generations complement each other and organisations can thrive from this diversity. A quotation from Francis Bacon (1625) summarises the findings below.

"The errors of young men, are the ruin of business; but the errors of aged men, amount but to this, that more might have been done, or sooner. Young men, in the conduct and manage of actions, embrace more than they can hold; stir more than they can quiet; fly to the end, without consideration of the means and degrees; pursue some few principles, which they have chanced upon absurdly; care not to innovate, which draws unknown inconveniences; use extreme remedies at first; and, that which doubleth all errors, will not acknowledge or retract them; like an unready horse, that will neither stop nor turn.

Men of age object too much, consult too long, adventure too little, repent too soon, and seldom drive business home to the full period, but content themselves with a mediocrity of success. Certainly it is good to compound employments of both; for that will be good for the present, because the virtues of either age, may correct the defects of both; and good for succession that young men may be learners, while men in age are actors." **Francis Bacon (1625): *Of Youth and Age.***

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Appendix

Appendix A1 Factor analysis

Rotated Component Matrix

	Component											
	1	2	3	4	5	6	7	8	9	10	11	12
Job Satisfaction	**.845**											
Job Satisfaction	**.785**											
Job Satisfaction	**.779**											
Job Satisfaction	**.735**											
Affective commitment	**-.438**	**.425**										
Continuance commitment		**.751**										
Continuance commitment		**.717**										
Continuance commitment		**.651**										
Normative commitment		**.648**										
Affective commitment	**-.463**	**.589**										
Affective commitment	**-.406**	**.559**										
Normative commitment	**-.417**	**.481**										
Normative commitment												
Altruistic wk values			**.777**									
Altruistic wk values			**.708**									
Altruistic wk values			**.664**									
Prestige wk values			**.497**							**.442**		
Goal Internalisation				**.758**								
Goal Internalisation				**.706**								
Goal Internalinalisation				**.697**								
Intrinsic work values					**.825**							
Intrinsic work values					**.738**							

Intrinsic work values					**.727**							
Extrinsic work values						**.758**						
Extrinsic work values						**.729**						
Extrinsic wk values						**.704**						
Social wk values							**.766**					
Social work values							**.731**					
Intrinsic Motivation								**.749**				
Intrinsic Motivation								**.678**				
Intrinsic Motivation								**.449**				
External self-Motivation									**.710**			
External Self-Motivation									**.599**			
External self-Motivation									**.574**			
Prestige work values										**.733**		
Prestige work values										**.549**		
Internal self-Motivation											**.783**	
Internal self-Motivation											**.605**	
Extrinsic Motivation											**-.505**	
Extrinsic Motivation												**.685**
Extrinsic Motivation												**.659**

Rotation Method: Varimax with Kaiser Normalization. Extraction Method: Principal Component Analysis.

Total Variance Explained

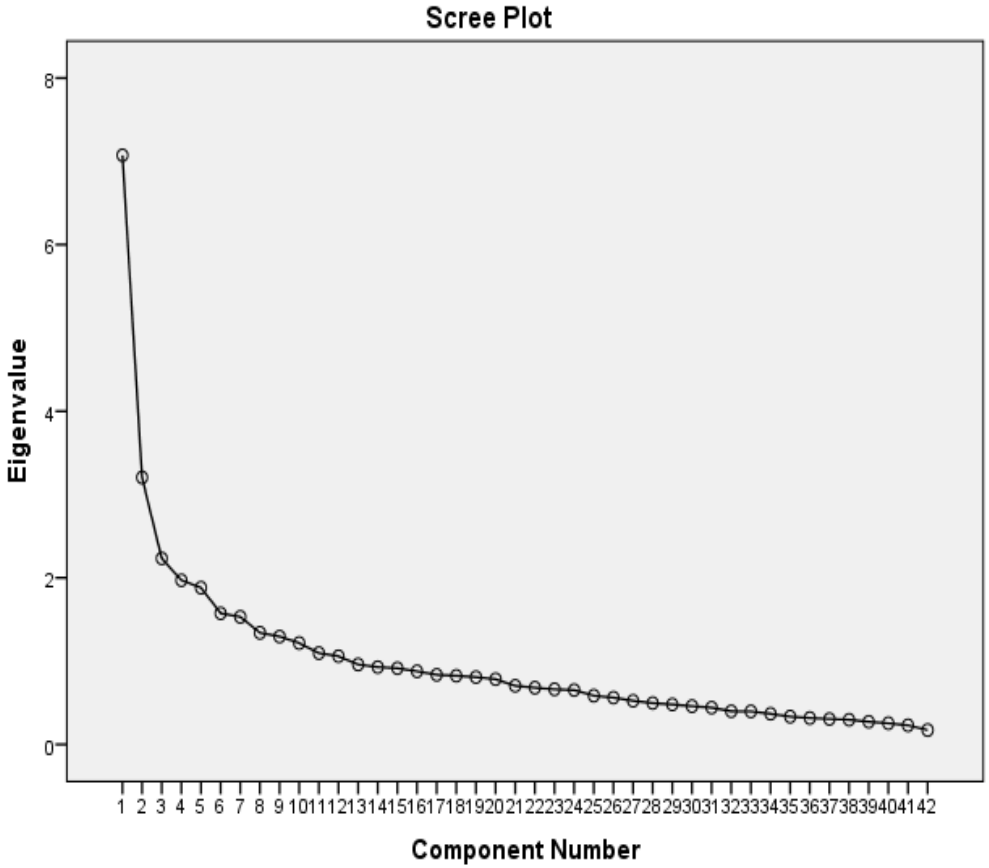
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	7.073	16.841	16.841	7.073	16.841	16.841	3.659	8.712	8.712
2	3.205	7.630	24.472	3.205	7.630	24.472	3.467	8.255	16.967
3	2.234	5.318	29.790	2.234	5.318	29.790	2.280	5.429	22.396
4	1.971	4.693	34.483	1.971	4.693	34.483	2.133	5.079	27.476
5	1.881	4.479	38.962	1.881	4.479	38.962	2.112	5.029	32.504
6	1.574	3.748	42.710	1.574	3.748	42.710	1.890	4.501	37.005
7	1.532	3.647	46.356	1.532	3.647	46.356	1.793	4.269	41.275
8	1.340	3.190	49.547	1.340	3.190	49.547	1.791	4.264	45.539
9	1.295	3.084	52.631	1.295	3.084	52.631	1.733	4.127	49.665
10	1.217	2.897	55.527	1.217	2.897	55.527	1.630	3.880	53.545
11	1.097	2.612	58.139	1.097	2.612	58.139	1.505	3.584	57.130
12	1.059	2.522	60.661	1.059	2.522	60.661	1.483	3.531	60.661
13	.959	2.284	62.945						
14	.929	2.211	65.156						
15	.915	2.179	67.335						
16	.878	2.090	69.425						
17	.836	1.991	71.416						
18	.824	1.963	73.379						
19	.808	1.924	75.303						
20	.784	1.866	77.168						
21	.703	1.675	78.843						
22	.681	1.621	80.464						
23	.662	1.576	82.040						

24	.653	1.554	83.594						
25	.585	1.393	84.987						
26	.562	1.339	86.326						
27	.523	1.245	87.571						
28	.497	1.183	88.755						
29	.479	1.141	89.896						
30	.460	1.095	90.990						
31	.442	1.052	92.042						
32	.398	.948	92.990						
33	.396	.943	93.933						
34	.367	.874	94.807						
35	.334	.795	95.602						
36	.317	.755	96.356						
37	.306	.728	97.084						
38	.296	.705	97.789						
39	.272	.648	98.437						
40	.254	.605	99.043						
41	.229	.546	99.589						
42	.173	.411	100.000						

Extraction Method: Principal Component Analysis.

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.794
Bartlett's Test of Sphericity	Approx. Chi-Square	4050.906
	df	861
	Sig.	.000


Scree Plot
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1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42
Component Number

A

Appendix B

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson			
					R Square Change	F Change	Sig. F Change	
1	.320[a]	.103	.088	.669	.103	6.901	.000	1.732

a. Dependent Variable: Average Intrinsic motivation

b. Predictors: (Constant), Tenure, Gender, Race, Education, Health

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	4.154	.212		19.556	.000		
	Gender	.034	.077	.025	.446	.656	.974	1.027
	Health	-.036	.057	-.036	-.637	.525	.909	1.100
	Education	.008	.032	.014	.241	.809	.929	1.077
	Race	-.089	.062	-.081	-1.445	.150	.938	1.066
	Tenure	-.202	.040	-.291	-5.046	.000	.893	1.120

Age added

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson			
					R Square Change	F Change	Sig. F Change	
1	.393[a]	.154	.137	.650	.154	9.137	.000	1.718

a. Predictors: (Constant), Age, Gender, Race, Education, Health, Tenure

b. Dependent Variable: Average Intrinsic

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.		
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	4.178	.207		20.221	.000		
	Gender	.050	.075	.036	.669	.504	.971	1.029
	Health	.024	.057	.024	.424	.672	.853	1.172
	Education	.016	.031	.028	.499	.618	.925	1.081
	Race	-.100	.060	-.091	-1.660	.098	.936	1.068
	Tenure	-.087	.047	-.126	-1.848	.066	.606	1.650
	Age	-.267	.062	-.295	-4.282	.000	.591	1.691

Dependent Variable: Average Intrinsic

Extrinsic motivation

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson			
					R Square Change	F Change	Sig. F Change	
1	.127[a]	.016	.000	.960	.016	.985	.427	1.888

a. Predictors: (Constant), Tenure, Gender, Race, Education, Health

b. Dependent Variable: Average Extrinsic

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	3.996	.305		13.108	.000		
	Gender	.154	.111	.080	1.390	.166	.974	1.027
	Health	.080	.082	.058	.972	.332	.909	1.100
	Education	.015	.046	.020	.337	.736	.929	1.077
	Race	-.076	.089	-.051	-.860	.390	.938	1.066
	Tenure	-.077	.058	-.081	-1.334	.183	.893	1.120

Dependent Variable: Average Extrinsic motivation

Age added

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson			
					R Square Change	F Change	Sig. F Change	
1	.135[a]	.018	-.001	.960	.018	.929	.474	1.896

a. Predictors: (Constant), Age, Gender, Race, Education, Health, Tenure

b. Dependent Variable: Average Extrinsic

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	4.003	.305		13.118	.000		
	Gender	.159	.111	.083	1.427	.155	.971	1.029
	Health	.097	.085	.071	1.141	.255	.853	1.172
	Education	.018	.046	.023	.384	.701	.925	1.081
	Race	-.079	.089	-.053	-.892	.373	.936	1.068
	Tenure	-.045	.070	-.047	-.640	.523	.606	1.650
	Age	-.074	.092	-.060	-.808	.420	.591	1.691

Dependent Variable: Average Extrinsic
Internal self-motivation

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson			
					R Square Change	F Change	Sig. F Change	
1	.177[a]	.031	.015	.458	.031	1.944	.087	1.503

a. Predictors: (Constant), Tenure, Gender, Race, Education, Health

b. Dependent Variable: Average Internal self-Motivation

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	3.831	.146		26.324	.000		
	Gender	.040	.053	.043	.748	.455	.974	1.027
	Health	-.054	.039	-.081	-1.370	.172	.909	1.100
	Education	.045	.022	.121	2.062	.040	.929	1.077
	Race	.000	.042	.000	.004	.997	.938	1.066
	Tenure	.030	.027	.065	1.086	.278	.893	1.120

Age added

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson			
					R Square Change	F Change	Sig. F Change	
1	.203[a]	.041	.022	.457	.041	2.151	.048	1.522

. Predictors: (Constant), Age, Gender, Race, Education, Health, Tenure

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	3.824	.145		26.356	.000		
	Gender	.035	.053	.038	.662	.508	.971	1.029
	Health	-.071	.040	-.108	-1.768	.078	.853	1.172
	Education	.043	.022	.115	1.962	.051	.925	1.081
	Race	.003	.042	.004	.076	.939	.936	1.068
	Tenure	-.003	.033	-.007	-.103	.918	.606	1.650
	Age	.077	.044	.130	1.766	.078	.591	1.691

. Dependent Variable: Average Internal Motivation

External self-motivation

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson			
					R Square Change	F Change	Sig. F Change	
1	.193[a]	.037	.021	.643583073920716	.037	2.330	.043	1.592

a. Predictors: (Constant), Tenure, Gender, Race, Education, Health

b. Dependent Variable: Average Extern Mot

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.		
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	3.163	.204		15.473	.000		
	Gender	.134	.074	.103	1.804	.072	.974	1.027
	Health	-.049	.055	-.053	-.889	.375	.909	1.100
	Education	.019	.031	.036	.615	.539	.929	1.077
	Race	.058	.059	.057	.978	.329	.938	1.066
	Tenure	.088	.039	.136	2.274	.024	.893	1.120

. Dependent Variable: Average Extern Mot

Age added

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson			
					R Square Change	F Change	Sig. F Change	
1	.317[a]	.100	.082	.623140199920302	.100	5.594	.000	1.632

a. Predictors: (Constant), Age, Gender, Race, Education, Health, Tenure

b. Dependent Variable: Average Extern Mot

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	3.138	.198		15.846	.000		
	Gender	.118	.072	.091	1.635	.103	.971	1.029
	Health	-.112	.055	-.120	-2.026	.044	.853	1.172
	Education	.011	.030	.021	.364	.716	.925	1.081
	Race	.069	.058	.068	1.197	.232	.936	1.068
	Tenure	-.030	.045	-.047	-.671	.503	.606	1.650
	Age	.275	.060	.327	4.598	.000	.591	1.691

a. Dependent Variable: Average Extern Mot

Goal internalisation

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson			
					R Square Change	F Change	Sig. F Change	
1	.238[a]	.057	.041	.769789748749252	.057	3.635	.003	1.477

a. Predictors: (Constant), Tenure, Gender, Race, Education, Health

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2.663	.245		10.890	.000		
	Gender	-.122	.089	-.078	-1.374	.170	.974	1.027
	Health	.015	.066	.014	.233	.816	.909	1.100
	Education	.049	.037	.078	1.344	.180	.929	1.077
	Race	.073	.071	.059	1.022	.307	.938	1.066
	Tenure	.136	.046	.175	2.954	.003	.893	1.120

. Dependent Variable: Average Goal InternanalisatioAge added

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson			
					R Square Change	F Change	Sig. F Change	
1	.272[a]	.074	.055	.764029389779567	.074	4.003	.001	1.490

a. Predictors: (Constant), Age, Gender, Race, Education, Health, Tenure

b. Dependent Variable: Average Goal International

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2.647	.243		10.902	.000		
	Gender	-.133	.088	-.084	-1.499	.135	.971	1.029
	Health	-.024	.068	-.021	-.356	.722	.853	1.172
	Education	.044	.037	.070	1.213	.226	.925	1.081
	Race	.079	.071	.065	1.126	.261	.936	1.068
	Tenure	.062	.056	.079	1.114	.266	.606	1.650
	Age	.173	.073	.170	2.360	.019	.591	1.691

Dependent Variable: Average Goal Internalisation

Intrinsic work values

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson			
					R Square Change	F Change	Sig. F Change	
1	.206[a]	.042	.026	.527243260561883	.042	2.666	.022	1.794

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.452	.167		8.669	.000		
	Gender	.010	.061	.009	.165	.869	.974	1.027
	Health	.069	.045	.090	1.527	.128	.909	1.100
	Education	-.057	.025	-.133	-2.281	.023	.929	1.077
	Race	.005	.049	.006	.106	.915	.938	1.066
	Tenure	.076	.032	.143	2.392	.017	.893	1.120

a. Dependent Variable: Average Intrinsic Work Values

Age added

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson			
					R Square Change	F Change	Sig. F Change	
1	.233[a]	.054	.035	.524822272612981	.054	2.875	.010	1.804

a. Predictors: (Constant), Age, Gender, Race, Education, Health, Tenure

b. Dependent Variable: Average Intrinsic Work Values

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics		
		B	Std. Error	Beta			Part	Tolerance	VIF
1	(Constant)	1.443	.167		8.651	.000			
	Gender	.004	.061	.004	.069	.945	.004	.971	1.029
	Health	.047	.046	.061	1.004	.316	.056	.853	1.172
	Education	-.060	.025	-.140	-2.402	.017	-.135	.925	1.081
	Race	.009	.048	.011	.186	.852	.010	.936	1.068
	Tenure	.033	.038	.063	.876	.382	.049	.606	1.650
	Age	.098	.050	.142	1.947	.052	.109	.591	1.691

Dependent Variable: Average Intrinsic Work Values

Extrinsic work values

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson			
					R Square Change	F Change	Sig. F Change	
1	.167[a]	.028	.012	.636912779685806	.028	1.735	.126	2.200

a. Predictors: (Constant), Tenure, Gender, Race, Education, Health

b. Dependent Variable: Average Extrinsic Work Values

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2.280	.202		11.272	.000		
	Gender	-.038	.074	-.030	-.514	.608	.974	1.027
	Health	.070	.055	.076	1.274	.204	.909	1.100
	Education	-.054	.030	-.105	-1.777	.077	.929	1.077
	Race	-.069	.059	-.069	-1.180	.239	.938	1.066
	Tenure	-.045	.038	-.070	-1.168	.244	.893	1.120

Dependent Variable: Aver Extrinsic Work Values

Age added

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson			
					R Square Change	F Change	Sig. F Change	
1	.239[a]	.057	.038	.628305223837891	.057	3.041	.007	2.245

a. Predictors: (Constant), Age, Gender, Race, Education, Health, Tenure

b. Dependent Variable: Aver Extrinsic Work Values

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2.297	.200		11.507	.000		
	Gender	-.027	.073	-.021	-.370	.712	.971	1.029
	Health	.111	.056	.122	2.007	.046	.853	1.172
	Education	-.049	.030	-.094	-1.619	.107	.925	1.081
	Race	-.077	.058	-.076	-1.320	.188	.936	1.068
	Tenure	.035	.046	.054	.756	.450	.606	1.650
	Age	-.184	.060	-.222	-3.055	.002	.591	1.691

Dependent Variable: Aver Extrinsic Work Values

Prestige work values

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson			
					R Square Change	F Change	Sig. F Change	
1	.373[a]	.139	.125	.557	.139	9.749	.000	1.827

a. Predictors: (Constant), Tenure, Gender, Race, Education, Health

b. Dependent Variable: Average Prestige Work Values

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	3.004	.177		16.991	.000		
	Gender	.024	.064	.020	.374	.708	.974	1.027
	Health	.000	.048	.000	.006	.995	.909	1.100
	Education	-.059	.027	-.123	-2.219	.027	.929	1.077
	Race	-.055	.051	-.059	-1.063	.289	.938	1.066
	Tenure	-.184	.033	-.312	-5.525	.000	.893	1.120

Dependent Variable: Average Prestige Work Value

Age added

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.393[a]	.154	.137	.552	.154	9.152	6	301	.000	1.778

a. Predictors: (Constant), Age, Gender, Race, Education, Health, Tenure

b. Dependent Variable: Average Prestige Work Values

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	3.015	.176		17.174	.000		
	Gender	.031	.064	.026	.492	.623	.971	1.029
	Health	.028	.049	.033	.583	.560	.853	1.172
	Education	-.055	.026	-.115	-2.095	.037	.925	1.081
	Race	-.059	.051	-.064	-1.165	.245	.936	1.068
	Tenure	-.131	.040	-.222	-3.262	.001	.606	1.650
	Age	-.124	.053	-.161	-2.335	.020	.591	1.691

Dependent Variable: Average Prestige Work Values
Altruistic work values

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson			
					R Square Change	F Change	Sig. F Change	
1	.284[a]	.081	.065	.637260360934039	.081	5.300	.000	1.646

Predictors: (Constant), Tenure, Gender, Race, Education, Health

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.		
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2.825	.202		13.957	.000		
	Gender	.036	.074	.028	.493	.623	.974	1.027
	Health	-.046	.055	-.049	-.841	.401	.909	1.100
	Education	-.066	.030	-.124	-2.164	.031	.929	1.077
	Race	-.033	.059	-.032	-.555	.579	.938	1.066
	Tenure	-.135	.038	-.207	-3.545	.000	.893	1.120

Dependent Variable: Average Altruistic Work Values

Age added

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson			
					R Square Change	F Change	Sig. F Change	
1	.336[a]	.113	.095	.626945560983182	.113	6.400	.000	1.626

a. Predictors: (Constant), Age, Gender, Race, Education, Health, Tenure

b. Dependent Variable: Average Altruistic Work Values

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.		
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2.844	.199		14.274	.000		
	Gender	.048	.073	.037	.664	.507	.971	1.029
	Health	.000	.055	.000	-.008	.994	.853	1.172
	Education	-.060	.030	-.113	-2.000	.046	.925	1.081
	Race	-.041	.058	-.039	-.699	.485	.936	1.068
	Tenure	-.050	.046	-.076	-1.086	.278	.606	1.650
	Age	-.200	.060	-.234	-3.319	.001	.591	1.691

a. Dependent Variable: Average Altruistic Work Values

Social work values

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson			
					R Square Change	F Change	Sig. F Change	
1	.329[a]	.108	.094	.776	.108	7.346	.000	1.912

Predictors: (Constant), Tenure, Gender, Race, Education, Health

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.		
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.619	.247		6.565	.000		
	Gender	-.084	.090	-.052	-.941	.348	.974	1.027
	Health	.120	.066	.103	1.799	.073	.909	1.100
	Education	-.022	.037	-.034	-.602	.548	.929	1.077
	Race	-.167	.072	-.131	-2.334	.020	.938	1.066
	Tenure	.236	.047	.292	5.071	.000	.893	1.120

Dependent Variable: Average Social Values

Age added

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson			
					R Square Change	F Change	Sig. F Change	
1	.359[a]	.129	.111	.769	.129	7.403	.000	1.916

a. Predictors: (Constant), Age, Gender, Race, Education, Health, Tenure

b. Dependent Variable: Average Social Values

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.		
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.601	.244		6.554	.000		
	Gender	-.096	.089	-.059	-1.079	.282	.971	1.029
	Health	.075	.068	.065	1.108	.269	.853	1.172
	Education	-.028	.037	-.043	-.762	.447	.925	1.081
	Race	-.160	.071	-.125	-2.247	.025	.936	1.068
	Tenure	.152	.056	.188	2.722	.007	.606	1.650
	Age	.195	.074	.185	2.639	.009	.591	1.691

a. Dependent Variable: Average Social Values

Affective commitment

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson			
					R Square Change	F Change	Sig. F Change	
1	.393[a]	.155	.141	.847212258712693	.155	11.052	.000	1.923

a. Predictors: (Constant), Tenure, Gender, Race, Education, Health

b. Dependent Variable: Average affect Continuance Commitment

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.		
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	4.317	.269		16.042	.000		
	Gender	-.146	.098	-.080	-1.491	.137	.974	1.027
	Health	-.014	.073	-.010	-.187	.852	.909	1.100
	Education	.006	.040	.008	.154	.877	.929	1.077
	Race	-.063	.078	-.044	-.810	.419	.938	1.066
	Tenure	-.343	.051	-.378	-6.759	.000	.893	1.120

a. Dependent Variable: Average affective Continuance Commitment

Age added

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson			
					R Square Change	F Change	Sig. F Change	
1	.453[a]	.205	.189	.823069636206988	.205	12.921	.000	2.021

a. Predictors: (Constant), Age, Gender, Race, Education, Health, Tenure

b. Dependent Variable: Average affect Continuance Commitment

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.		
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	4.349	.262		16.628	.000		
	Gender	-.126	.095	-.069	-1.318	.189	.971	1.029
	Health	.065	.073	.050	.891	.374	.853	1.172
	Education	.016	.039	.022	.414	.679	.925	1.081
	Race	-.077	.076	-.054	-1.011	.313	.936	1.068
	Tenure	-.195	.060	-.215	-3.262	.001	.606	1.650
	Age	-.344	.079	-.291	-4.356	.000	.591	1.691

a. Dependent Variable: Average affect Continuance Commitment

b. Predictors: (Constant), Age, Gender, Race, Education, Health, Tenure

Continuance commitment

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson			
					R Square Change	F Change	Sig. F Change	
1	.370[a]	.137	.123	.835410774641145	.137	9.593	.000	1.801

a. Predictors: (Constant), Tenure, Gender, Race, Education, Health

b. Dependent Variable: Average Continuance Commitment

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.		
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	3.964	.265		14.936	.000		
	Gender	-.015	.097	-.009	-.157	.875	.974	1.027
	Health	-.110	.072	-.086	-1.532	.127	.909	1.100
	Education	.046	.040	.064	1.159	.248	.929	1.077
	Race	.030	.077	.021	.383	.702	.938	1.066
	Tenure	-.316	.050	-.357	-6.312	.000	.893	1.120

Dependent Variable: Average Continuance CommitmentAge added

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson			
					R Square Change	F Change	Sig. F Change	
1	.424[a]	.180	.164	.815650450061602	.180	11.021	.000	1.850

a. Predictors: (Constant), Age, Gender, Race, Education, Health, Tenure

b. Dependent Variable: Average Continuance Commitment

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.		
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	3.992	.259		15.403	.000		
	Gender	.003	.094	.002	.035	.972	.971	1.029
	Health	-.039	.072	-.030	-.537	.591	.853	1.172
	Education	.055	.039	.077	1.418	.157	.925	1.081
	Race	.017	.075	.012	.230	.818	.936	1.068
	Tenure	-.182	.059	-.206	-3.072	.002	.606	1.650
	Age	-.311	.078	-.270	-3.976	.000	.591	1.691

Dependent Variable: Average Continuance Commitment

Normative commitment

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.363[a]	.132	.117	.714	.132	9.163	5	302	.000	1.732

a. Predictors: (Constant), Tenure, Gender, Race, Education, Health

b. Dependent Variable: Average Normative Commitment

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.		
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	3.814	.227		16.825	.000		
	Gender	.066	.083	.044	.806	.421	.974	1.027
	Health	-.108	.061	-.099	-1.761	.079	.909	1.100
	Education	.013	.034	.021	.369	.712	.929	1.077
	Race	.055	.066	.047	.841	.401	.938	1.066
	Tenure	-.254	.043	-.336	-5.927	.000	.893	1.120

Dependent Variable: Average Normative Commitment

Age added

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson			
					R Square Change	F Change	Sig. F Change	
1	.381[a]	.145	.128	.709	.145	8.494	.000	1.758

a. Predictors: (Constant), Age, Gender, Race, Education, Health, Tenure

b. Dependent Variable: Average Normative Commitment

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.		
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	3.827	.225		16.978	.000		
	Gender	.075	.082	.049	.915	.361	.971	1.029
	Health	-.074	.063	-.068	-1.186	.237	.853	1.172
	Education	.017	.034	.028	.496	.620	.925	1.081
	Race	.050	.066	.042	.758	.449	.936	1.068
	Tenure	-.191	.052	-.253	-3.695	.000	.606	1.650
	Age	-.146	.068	-.149	-2.146	.033	.591	1.691

Dependent Variable: Average Normative Commitment

Job satisfaction

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson			
					R Square Change	F Change	Sig. F Change	
1	.465[a]	.216	.203	.572	.216	16.671	.000	1.931

a. Predictors: (Constant), Tenure, Gender, Race, Education, Health

b. Dependent Variable: Average Job Satisfaction

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.		
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.868	.182		10.276	.000		
	Gender	-.048	.066	-.037	-.720	.472	.974	1.027
	Health	-.011	.049	-.012	-.229	.819	.909	1.100
	Education	.014	.027	.026	.496	.620	.929	1.077
	Race	.032	.053	.032	.602	.547	.938	1.066
	Tenure	.289	.034	.454	8.431	.000	.893	1.120

. Dependent Variable: Average Job Satisfaction

Age added

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.492[a]	.242	.227	.564	.242	16.006	6	301	.000	1.963

a. Predictors: (Constant), Age, Gender, Race, Education, Health, Tenure

b. Dependent Variable: Average Job Satisfaction

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.		
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.852	.179		10.337	.000		
	Gender	-.058	.065	-.045	-.886	.376	.971	1.029
	Health	-.050	.050	-.055	-1.013	.312	.853	1.172
	Education	.008	.027	.016	.315	.753	.925	1.081
	Race	.039	.052	.038	.741	.459	.936	1.068
	Tenure	.215	.041	.338	5.243	.000	.606	1.650
	Age	.172	.054	.208	3.187	.002	.591	1.691

Dependent Variable: Average Job Satisfaction

APPENDIX 4 LOG TRANSFORMED DATA

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson			
					R Square Change	F Change	Sig. F Change	
1	.315[a]	.099	.085	.22153	.099	6.669	.000	1.760

a. Predictors: (Constant), Tenure, Gender, Race, Education, Health

b. Dependent Variable: log transformed average intrinsic mot

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.		
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.441	.070		20.470	.000		
	Gender	.016	.026	.035	.634	.526	.974	1.027
	Health	-.015	.019	-.046	-.803	.423	.909	1.100
	Education	.003	.011	.018	.318	.751	.929	1.077
	Race	-.027	.020	-.074	-1.305	.193	.938	1.066
	Tenure	-.065	.013	-.285	-4.925	.000	.893	1.120

a. Dependent Variable: log transformed average intrinsic mot

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson			
					R Square Change	F Change	Sig. F Change	
1	.385[a]	.148	.131	.21579	.148	8.740	.000	1.751

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.		
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.448	.069		21.123	.000		
	Gender	.021	.025	.046	.855	.393	.971	1.029
	Health	.004	.019	.013	.230	.818	.853	1.172
	Education	.006	.010	.032	.570	.569	.925	1.081
	Race	-.030	.020	-.083	-1.509	.132	.936	1.068
	Tenure	-.028	.016	-.123	-1.808	.072	.606	1.650
	Age	-.086	.021	-.288	-4.159	.000	.591	1.691

a. Dependent Variable: log transformed average intrinsic mot

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson			
					R Square Change	F Change	Sig. F Change	
1	.144[a]	.021	.004	.19007	.021	1.273	.275	1.762

a. Predictors: (Constant), Tenure, Gender, Race, Education, Health

b. Dependent Variable: Log transformed average extrinsic mot

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.		
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.430	.060		23.691	.000		
	Gender	.024	.022	.062	1.078	.282	.974	1.027
	Health	.003	.016	.011	.191	.849	.909	1.100
	Education	-.003	.009	-.017	-.288	.773	.929	1.077
	Race	-.017	.018	-.058	-.992	.322	.938	1.066
	Tenure	-.020	.011	-.105	-1.750	.081	.893	1.120

. Dependent Variable: Log transformed average extrinsic mot

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson			
					R Square Change	F Change	Sig. F Change	
1	.149[a]	.022	.003	.19022	.022	1.146	.336	1.763

a. Predictors: (Constant), Age, Gender, Race, Education, Health, Tenure

b. Dependent Variable: Log transformed average extrinsic mot

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.		
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.432	.060		23.683	.000		
	Gender	.024	.022	.064	1.111	.268	.971	1.029
	Health	.006	.017	.022	.363	.717	.853	1.172
	Education	-.002	.009	-.015	-.245	.806	.925	1.081
	Race	-.018	.018	-.060	-1.020	.308	.936	1.068
	Tenure	-.014	.014	-.076	-1.032	.303	.606	1.650
	Age	-.013	.018	-.053	-.721	.471	.591	1.691

. Dependent Variable: Log transformed average extrinsic mot

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson			
					R Square Change	F Change	Sig. F Change	
1	.185[a]	.034	.018	.12437	.034	2.143	.060	1.456

a. Predictors: (Constant), Tenure, Gender, Race, Education, Health

b. Dependent Variable: Log transformed average internal self mot

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.		
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.330	.040		33.656	.000		
	Gender	.008	.014	.034	.587	.558	.974	1.027
	Health	-.015	.011	-.083	-1.395	.164	.909	1.100
	Education	.013	.006	.133	2.264	.024	.929	1.077
	Race	.000	.011	-.002	-.027	.978	.938	1.066
	Tenure	.008	.007	.068	1.129	.260	.893	1.120

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson			
					R Square Change	F Change	Sig. F Change	
1	.211[a]	.045	.026	.12390	.045	2.342	.032	1.475

a. Predictors: (Constant), Age, Gender, Race, Education, Health, Tenure

b. Dependent Variable: Log transformed average internal self mot

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.		
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.328	.039		33.718	.000		
	Gender	.007	.014	.029	.499	.618	.971	1.029
	Health	-.020	.011	-.110	-1.803	.072	.853	1.172
	Education	.013	.006	.127	2.162	.031	.925	1.081
	Race	.001	.011	.003	.046	.963	.936	1.068
	Tenure	-.001	.009	-.006	-.090	.929	.606	1.650
	Age	.021	.012	.132	1.805	.072	.591	1.691

a. Dependent Variable: Log transformed average internal self mot

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson			
					R Square Change	F Change	Sig. F Change	
1	.198[a]	.039	.023	.20491	.039	2.463	.033	1.553

a. Predictors: (Constant), Tenure, Gender, Race, Education, Health

b. Dependent Variable: Log transformed average external self s mot

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.		
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.115	.065		17.131	.000		
	Gender	.043	.024	.105	1.833	.068	.974	1.027
	Health	-.014	.018	-.047	-.798	.425	.909	1.100
	Education	.006	.010	.038	.653	.514	.929	1.077
	Race	.018	.019	.056	.963	.336	.938	1.066
	Tenure	.029	.012	.142	2.377	.018	.893	1.120

Dependent Variable: Log transformed average external self mot

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson			
					R Square Change	F Change	Sig. F Change	
1	.317[a]	.101	.083	.19858	.101	5.614	.000	1.584

a. Predictors: (Constant), Age, Gender, Race, Education, Health, Tenure

b. Dependent Variable: Log transformed average external self mot

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.		
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.107	.063		17.543	.000		
	Gender	.038	.023	.092	1.666	.097	.971	1.029
	Health	-.034	.018	-.114	-1.920	.056	.853	1.172
	Education	.004	.009	.023	.407	.684	.925	1.081
	Race	.022	.018	.067	1.179	.239	.936	1.068
	Tenure	-.008	.014	-.039	-.550	.583	.606	1.650
	Age	.086	.019	.322	4.535	.000	.591	1.691

a. Predictors: (Constant), Age, Gender, Race, Education, Health, Tenure

b. Dependent Variable: Log transformed average external self mot

Goal internalisation

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson			
					R Square Change	F Change	Sig. F Change	
1	.233[a]	.054	.039	.25461	.054	3.468	.005	1.433

a. Predictors: (Constant), Tenure, Gender, Race, Education, Health

b. Dependent Variable: Log transformed average goal internalisation mot

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.		
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.952	.081		11.766	.000		
	Gender	-.035	.029	-.068	-1.191	.235	.974	1.027
	Health	.001	.022	.002	.034	.973	.909	1.100
	Education	.015	.012	.073	1.255	.211	.929	1.077
	Race	.028	.023	.070	1.203	.230	.938	1.066
	Tenure	.045	.015	.174	2.943	.003	.893	1.120

Dependent Variable: Log transformed average goal internalisation mot

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson			
					R Square Change	F Change	Sig. F Change	
1	.267[a]	.071	.053	.25272	.071	3.858	.001	1.446

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.		
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.946	.080		11.784	.000		
	Gender	-.038	.029	-.074	-1.314	.190	.971	1.029
	Health	-.012	.022	-.033	-.549	.583	.853	1.172
	Education	.014	.012	.065	1.124	.262	.925	1.081
	Race	.031	.023	.075	1.307	.192	.936	1.068
	Tenure	.020	.018	.079	1.108	.269	.606	1.650
	Age	.057	.024	.170	2.355	.019	.591	1.691

Dependent Variable: Log transformed average goal internalisation

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson			
					R Square Change	F Change	Sig. F Change	
1	.217[a]	.047	.031	.28996	.047	2.977	.012	1.761

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.331	.092		3.592	.000		
	Gender	.003	.034	.006	.103	.918	.974	1.027
	Health	.045	.025	.106	1.804	.072	.909	1.100
	Education	-.031	.014	-.131	-2.241	.026	.929	1.077
	Race	-.002	.027	-.004	-.062	.950	.938	1.066
	Tenure	.044	.017	.150	2.516	.012	.893	1.120

. Dependent Variable: Log transformed intrinsic work values average

Age

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson			
					R Square Change	F Change	Sig. F Change	
1	.245[a]	.060	.041	.28843	.060	3.211	.005	1.776

a. Predictors: (Constant), Age, Gender, Race, Education, Health, Tenure

b. Dependent Variable: Log transformed intrinsic work values average

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Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.		
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.326	.092		3.553	.000		
	Gender	6.421E-005	.033	.000	.002	.998	.971	1.029
	Health	.032	.025	.076	1.249	.213	.853	1.172
	Education	-.033	.014	-.138	-2.370	.018	.925	1.081
	Race	.001	.027	.001	.022	.983	.936	1.068
	Tenure	.019	.021	.066	.919	.359	.606	1.650
	Age	.057	.028	.149	2.055	.041	.591	1.691

a. Dependent Variable: Log transformed intrinsic work values average

Extrinsic work values

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson			
					R Square Change	F Change	Sig. F Change	
1	.194[a]	.038	.022	.31836	.038	2.357	.040	2.210

a. Predictors: (Constant), Tenure, Gender, Race, Education, Health

b. Dependent Variable: Log transformed extrinsic work values average

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.		
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.783	.101		7.747	.000		
	Gender	-.011	.037	-.017	-.296	.767	.974	1.027
	Health	.047	.027	.101	1.709	.088	.909	1.100
	Education	-.030	.015	-.118	-2.007	.046	.929	1.077
	Race	-.033	.029	-.066	-1.133	.258	.938	1.066
	Tenure	-.029	.019	-.091	-1.523	.129	.893	1.120

a. Dependent Variable: Log transformed extrinsic work values average

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson			
					R Square Change	F Change	Sig. F Change	
1	.245[a]	.060	.041	.31512	.060	3.211	.005	2.242

a. Predictors: (Constant), Age, Gender, Race, Education, Health, Tenure

b. Dependent Variable: Log transformed extrinsic work values average

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.		
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.791	.100		7.898	.000		
	Gender	-.006	.036	-.009	-.166	.868	.971	1.029
	Health	.065	.028	.141	2.338	.020	.853	1.172
	Education	-.028	.015	-.108	-1.866	.063	.925	1.081
	Race	-.036	.029	-.072	-1.254	.211	.936	1.068
	Tenure	.006	.023	.018	.257	.798	.606	1.650
	Age	-.081	.030	-.195	-2.690	.008	.591	1.691

Dependent Variable: Log transformed extrinsic work values average

Altruistic work values

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson			
					R Square Change	F Change	Sig. F Change	
1	.279[a]	.078	.062	.29216	.078	5.083	.000	1.681

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.		
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.034	.093		11.143	.000		
	Gender	.007	.034	.012	.208	.835	.974	1.027
	Health	-.023	.025	-.054	-.924	.356	.909	1.100
	Education	-.031	.014	-.130	-2.258	.025	.929	1.077
	Race	-.018	.027	-.037	-.650	.516	.938	1.066
	Tenure	-.058	.018	-.195	-3.332	.001	.893	1.120

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson			
					R Square Change	F Change	Sig. F Change	
1	.339[a]	.115	.097	.28672	.115	6.493	.000	1.651

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.		
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.043	.091		11.449	.000		
	Gender	.013	.033	.021	.387	.699	.971	1.029
	Health	-.001	.025	-.002	-.036	.971	.853	1.172
	Education	-.029	.014	-.118	-2.089	.038	.925	1.081
	Race	-.021	.026	-.045	-.807	.420	.936	1.068
	Tenure	-.016	.021	-.055	-.788	.431	.606	1.650
	Age	-.098	.028	-.250	-3.545	.000	.591	1.691

Prestige work values

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson			
					R Square Change	F Change	Sig. F Change	
1	.355[a]	.126	.112	.24584	.126	8.707	.000	1.768

a. Predictors: (Constant), Tenure, Gender, Race, Education, Health

b. Dependent Variable: Log transformed prestige work values average

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.		
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.086	.078		13.910	.000		
	Gender	.004	.028	.008	.140	.888	.974	1.027
	Health	.005	.021	.014	.257	.798	.909	1.100
	Education	-.025	.012	-.120	-2.150	.032	.929	1.077
	Race	-.026	.023	-.063	-1.137	.256	.938	1.066
	Tenure	-.077	.015	-.297	-5.211	.000	.893	1.120

. Dependent Variable: Log transformed prestige work values average

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson			
					R Square Change	F Change	Sig. F Change	
1	.375[a]	.141	.124	.24414	.141	8.231	.000	1.725

a. Predictors: (Constant), Age, Gender, Race, Education, Health, Tenure

b. Dependent Variable: Log transformed prestige work values average

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.		
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.091	.078		14.066	.000		
	Gender	.007	.028	.014	.254	.800	.971	1.029
	Health	.018	.022	.047	.816	.415	.853	1.172
	Education	-.024	.012	-.113	-2.027	.044	.925	1.081
	Race	-.028	.023	-.068	-1.237	.217	.936	1.068
	Tenure	-.054	.018	-.208	-3.026	.003	.606	1.650
	Age	-.054	.023	-.159	-2.289	.023	.591	1.691

. Dependent Variable: Log transformed prestige work values average

Social work values

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson			
					R Square Change	F Change	Sig. F Change	
1	.311[a]	.097	.082	.35001	.097	6.468	.000	1.941

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.		
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.453	.111		4.078	.000		
	Gender	-.032	.040	-.043	-.781	.435	.974	1.027
	Health	.038	.030	.073	1.272	.204	.909	1.100
	Education	-.003	.017	-.009	-.165	.869	.929	1.077
	Race	-.069	.032	-.120	-2.132	.034	.938	1.066
	Tenure	.103	.021	.283	4.891	.000	.893	1.120

a. Dependent Variable: Log transformed social work values average

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson			
					R Square Change	F Change	Sig. F Change	
1	.337[a]	.114	.096	.34726	.114	6.442	.000	1.950

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.		
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.446	.110		4.041	.000		
	Gender	-.036	.040	-.050	-.905	.366	.971	1.029
	Health	.020	.031	.038	.647	.518	.853	1.172
	Education	-.005	.017	-.017	-.307	.759	.925	1.081
	Race	-.066	.032	-.115	-2.049	.041	.936	1.068
	Tenure	.068	.025	.188	2.697	.007	.606	1.650
	Age	.080	.033	.170	2.407	.017	.591	1.691

a. Dependent Variable: Log transformed social work values average

AFFECTIVE COMMITMENT

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson			
					R Square Change	F Change	Sig. F Change	
1	.387[a]	.150	.136	.30606	.150	10.659	.000	1.898

a. Predictors: (Constant), Tenure, Gender, Race, Education, Health

b. Dependent Variable: Log transformed affective commitment average

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.		
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.508	.097		15.510	.000		
	Gender	-.046	.035	-.070	-1.307	.192	.974	1.027
	Health	-.003	.026	-.007	-.122	.903	.909	1.100
	Education	.001	.015	.003	.060	.953	.929	1.077
	Race	-.019	.028	-.037	-.673	.501	.938	1.066
	Tenure	-.123	.018	-.375	-6.680	.000	.893	1.120

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson			
					R Square Change	F Change	Sig. F Change	
1	.444[a]	.197	.181	.29794	.197	12.322	.000	1.990

a. Predictors: (Constant), Age, Gender, Race, Education, Health, Tenure

b. Dependent Variable: Log transformed affective commitment average

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.		
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.519	.095		16.044	.000		
	Gender	-.039	.034	-.059	-1.134	.258	.971	1.029
	Health	.024	.026	.051	.919	.359	.853	1.172
	Education	.004	.014	.017	.308	.758	.925	1.081
	Race	-.024	.028	-.046	-.863	.389	.936	1.068
	Tenure	-.071	.022	-.217	-3.269	.001	.606	1.650
	Age	-.120	.029	-.282	-4.206	.000	.591	1.691

a. Dependent Variable: Log transformed affective commitment average

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson			
					R Square Change	F Change	Sig. F Change	
1	.377[a]	.142	.128	.29980	.142	10.005	.000	1.761

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.		
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.401	.095		14.712	.000		
	Gender	-.001	.035	-.002	-.028	.978	.974	1.027
	Health	-.040	.026	-.088	-1.565	.119	.909	1.100
	Education	.015	.014	.060	1.081	.281	.929	1.077
	Race	.013	.028	.026	.466	.641	.938	1.066
	Tenure	-.116	.018	-.363	-6.444	.000	.893	1.120

a. Dependent Variable: Log transformed continuance commitment average

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson			
					R Square Change	F Change	Sig. F Change	
1	.435[a]	.189	.173	.29199	.189	11.684	.000	1.819

a. Predictors: (Constant), Age, Gender, Race, Education, Health, Tenure

b. Dependent Variable: Log transformed continuance commitment average

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.		
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.412	.093		15.216	.000		
	Gender	.006	.034	.009	.177	.860	.971	1.029
	Health	-.014	.026	-.030	-.527	.599	.853	1.172
	Education	.019	.014	.073	1.352	.177	.925	1.081
	Race	.008	.027	.017	.308	.758	.936	1.068
	Tenure	-.066	.021	-.206	-3.088	.002	.606	1.650
	Age	-.117	.028	-.281	-4.167	.000	.591	1.691

a. Dependent Variable: Log transformed continuance commitment average

Normative commitment

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson			
					R Square Change	F Change	Sig. F Change	
1	.359[a]	.129	.114	.25992	.129	8.927	.000	1.723

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.		
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.356	.083		16.426	.000		
	Gender	.024	.030	.043	.798	.426	.974	1.027
	Health	-.037	.022	-.093	-1.658	.098	.909	1.100
	Education	.003	.012	.013	.237	.813	.929	1.077
	Race	.021	.024	.048	.858	.392	.938	1.066
	Tenure	-.091	.016	-.333	-5.864	.000	.893	1.120

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson			
					R Square Change	F Change	Sig. F Change	
1	.376[a]	.141	.124	.25851	.141	8.237	.000	1.750

a. Predictors: (Constant), Age, Gender, Race, Education, Health, Tenure

b. Dependent Variable: Log transformed normative commitment average

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.		
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.361	.082		16.567	.000		
	Gender	.027	.030	.049	.903	.367	.971	1.029
	Health	-.025	.023	-.064	-1.103	.271	.853	1.172
	Education	.004	.012	.020	.360	.719	.925	1.081
	Race	.019	.024	.043	.777	.438	.936	1.068
	Tenure	-.069	.019	-.253	-3.682	.000	.606	1.650
	Age	-.051	.025	-.144	-2.073	.039	.591	1.691

Dependent Variable: Log transformed normative commitment average

Job satisfaction

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson			
					R Square Change	F Change	Sig. F Change	
1	.458[a]	.210	.197	.22922	.210	16.027	.000	1.962

a. Predictors: (Constant), Tenure, Gender, Race, Education, Health

b. Dependent Variable: Log transformed job satisfaction average

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.		
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.632	.073		8.677	.000		
	Gender	-.027	.027	-.052	-1.006	.315	.974	1.027
	Health	-.002	.020	-.007	-.125	.901	.909	1.100
	Education	.006	.011	.029	.538	.591	.929	1.077
	Race	.014	.021	.034	.645	.519	.938	1.066
	Tenure	.113	.014	.444	8.195	.000	.893	1.120

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson			
					R Square Change	F Change	Sig. F Change	
1	.482[a]	.233	.217	.22625	.233	15.211	.000	2.004

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.		
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.626	.072		8.704	.000		
	Gender	-.031	.026	-.060	-1.166	.245	.971	1.029
	Health	-.017	.020	-.047	-.864	.388	.853	1.172
	Education	.004	.011	.019	.368	.713	.925	1.081
	Race	.016	.021	.040	.776	.438	.936	1.068
	Tenure	.085	.016	.333	5.139	.000	.606	1.650
	Age	.065	.022	.197	3.001	.003	.591	1.691

. Dependent Variable: Log transformed job satisfaction average

Appendix B 6-outliers removed

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson			
					R Square Change	F Change	Sig. F Change	
1	.328[a]	.108	.092	.668	.108	7.094	.000	1.745

a. Dependent Variable: Average Intrinsic motivation

b. Predictors: (Constant), Tenure, Gender, Race, Education, Health

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	15.848	5	3.170	7.094	.000[b]
	Residual	131.356	294	.447		
	Total	147.204	299			

a. Dependent Variable: Average Intrinsic motivation

b. Predictors: (Constant), Tenure, Gender, Race, Education, Health

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.		
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	4.145	.218		19.025	.000		
	Gender	.033	.078	.023	.418	.676	.979	1.021
	Health	-.022	.062	-.021	-.362	.717	.892	1.121
	Education	.019	.033	.033	.570	.569	.916	1.092
	Race	-.118	.067	-.101	-1.776	.077	.934	1.070
	Tenure	-.207	.042	-.293	-4.891	.000	.847	1.181

a. Dependent Variable: Average Intrinsic motivation

b. Predictors: (Constant), Tenure, Gender, Race, Education, Health

AGE ADDED

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson			
					R Square Change	F Change	Sig. F Change	
1	.393[a]	.154	.137	.652	.154	8.896	.000	1.739

a. Dependent Variable: Average Intrinsic motivation

b. Predictors: (Constant), Age, Gender, Race, Education, Health, Tenure

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.		
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	4.177	.213		19.640	.000		
	Gender	.054	.076	.039	.712	.477	.974	1.026
	Health	.038	.062	.036	.611	.542	.840	1.191
	Education	.023	.032	.041	.723	.470	.915	1.093
	Race	-.139	.065	-.119	-2.128	.034	.929	1.077
	Tenure	-.088	.051	-.124	-1.723	.086	.557	1.795
	Age	-.262	.065	-.288	-4.010	.000	.561	1.781

a. Dependent Variable: Average Intrinsic motivation

b. Predictors: (Constant), Age, Gender, Race, Education, Health, Tenure

Extrinsic

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson			
					R Square Change	F Change	Sig. F Change	
1	.130[a]	.017	.000	.968	.017	1.006	.415	1.863

a. Dependent Variable: Average Extrinsic

b. Predictors: (Constant), Tenure, Gender, Race, Education, Health

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.		
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	3.978	.316		12.602	.000		
	Gender	.155	.113	.080	1.372	.171	.979	1.021
	Health	.067	.090	.046	.750	.454	.892	1.121
	Education	.031	.048	.040	.656	.512	.916	1.092
	Race	-.081	.097	-.050	-.838	.402	.934	1.070
	Tenure	-.082	.061	-.084	-1.342	.181	.847	1.181

a. Dependent Variable: Average Extrinsic

b. Predictors: (Constant), Tenure, Gender, Race, Education, Health
Age

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson			
					R Square Change	F Change	Sig. F Change	
1	.134[a]	.018	-.002	.969	.018	.896	.498	1.871

a. Dependent Variable: Average Extrinsic

b. Predictors: (Constant), Age, Gender, Race, Education, Health, Tenure

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.		
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	3.985	.316		12.602	.000		
	Gender	.160	.113	.083	1.410	.160	.974	1.026
	Health	.081	.093	.055	.873	.383	.840	1.191
	Education	.032	.048	.041	.676	.500	.915	1.093
	Race	-.085	.097	-.053	-.882	.379	.929	1.077
	Tenure	-.056	.076	-.057	-.736	.463	.557	1.795
	Age	-.058	.097	-.046	-.601	.548	.561	1.781

a. Dependent Variable: Average Extrinsic

b. Predictors: (Constant), Age, Gender, Race, Education, Health, Tenure

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson			
					R Square Change	F Change	Sig. F Change	
1	.187[a]	.035	.019	.643144890271905	.035	2.134	.061	1.627

a. Dependent Variable: Average Extern Mot

b. Predictors: (Constant), Tenure, Gender, Race, Education, Health

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.		
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	3.163	.210		15.088	.000		
	Gender	.134	.075	.104	1.788	.075	.979	1.021
	Health	-.050	.060	-.051	-.844	.399	.892	1.121
	Education	.013	.032	.025	.424	.672	.916	1.092
	Race	.077	.064	.071	1.204	.230	.934	1.070
	Tenure	.084	.041	.129	2.071	.039	.847	1.181

a. Dependent Variable: Average Extern Mot

b. Predictors: (Constant), Tenure, Gender, Race, Education, Health

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson			
					R Square Change	F Change	Sig. F Change	
1	.312[a]	.097	.079	.623121506087958	.097	5.261	.000	1.643

a. Dependent Variable: Average External Motivation

b. Predictors: (Constant), Age, Gender, Race, Education, Health, Tenure

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.		
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	3.130	.203		15.399	.000		
	Gender	.111	.073	.086	1.522	.129	.974	1.026
	Health	-.115	.059	-.117	-1.934	.054	.840	1.191
	Education	.009	.031	.016	.282	.778	.915	1.093
	Race	.099	.062	.092	1.589	.113	.929	1.077
	Tenure	-.043	.049	-.066	-.894	.372	.557	1.795
	Age	.280	.062	.333	4.494	.000	.561	1.781

a. Dependent Variable: Average External Motivation

b. Predictors: (Constant), Age, Gender, Race, Education, Health, Tenure

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson			
					R Square Change	F Change	Sig. F Change	
1	.170[a]	.029	.012	.449	.029	1.752	.123	1.547

a. Dependent Variable: Average Internal Motivation

b. Predictors: (Constant), Tenure, Gender, Race, Education, Health

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.		
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	3.794	.146		25.898	.000		
	Gender	.050	.052	.055	.950	.343	.979	1.021
	Health	-.057	.042	-.084	-1.375	.170	.892	1.121
	Education	.040	.022	.107	1.779	.076	.916	1.092
	Race	.034	.045	.045	.759	.449	.934	1.070
	Tenure	.029	.028	.064	1.029	.304	.847	1.181

a. Dependent Variable: Average Internal Motivation

b. Predictors: (Constant), Tenure, Gender, Race, Education, Health

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson			
					R Square Change	F Change	Sig. F Change	
1	.183[a]	.034	.014	.449	.034	1.698	.121	1.563

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.		
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	3.787	.146		25.855	.000		
	Gender	.045	.053	.050	.863	.389	.974	1.026
	Health	-.070	.043	-.102	-1.624	.106	.840	1.191
	Education	.039	.022	.104	1.738	.083	.915	1.093
	Race	.038	.045	.051	.850	.396	.929	1.077
	Tenure	.005	.035	.011	.140	.889	.557	1.795
	Age	.053	.045	.091	1.190	.235	.561	1.781

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson			
					R Square Change	F Change	Sig. F Change	
1	.240[a]	.058	.042	.761990378440207	.058	3.591	.004	1.470

a. Dependent Variable: Average Goal Internalisation

b. Predictors: (Constant), Tenure, Gender, Race, Education, Health

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.		
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2.671	.248		10.755	.000		
	Gender	-.145	.089	-.093	-1.631	.104	.979	1.021
	Health	.072	.071	.061	1.014	.311	.892	1.121
	Education	.040	.038	.063	1.067	.287	.916	1.092
	Race	.079	.076	.061	1.039	.300	.934	1.070
	Tenure	.114	.048	.145	2.358	.019	.847	1.181

a. Dependent Variable: Average Goal Internalisation

b. Predictors: (Constant), Tenure, Gender, Race, Education, Health

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson			
					R Square Change	F Change	Sig. F Change	
1	.272[a]	.074	.055	.756617074767492	.074	3.900	.001	1.479

a. Predictors: (Constant), Age, Gender, Race, Education, Health, Tenure

b. Dependent Variable: Average Goal Internalisation

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.		
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2.651	.247		10.741	.000		
	Gender	-.159	.089	-.103	-1.800	.073	.974	1.026
	Health	.032	.072	.027	.439	.661	.840	1.191
	Education	.037	.037	.059	.995	.320	.915	1.093
	Race	.092	.076	.071	1.221	.223	.929	1.077
	Tenure	.035	.059	.045	.594	.553	.557	1.795
	Age	.172	.076	.171	2.278	.023	.561	1.781

a. Dependent Variable: Average Goal Internalisation

b. Predictors: (Constant), Age, Gender, Race, Education, Health, Tenure

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson			
					R Square Change	F Change	Sig. F Change	
1	.188[a]	.035	.019	.636741129912337	.035	2.160	.059	2.228

a. Dependent Variable: Aver Extrinsic Work Values

b. Predictors: (Constant), Tenure, Gender, Race, Education, Health

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.		
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2.307	.208		11.114	.000		
	Gender	-.055	.074	-.043	-.744	.457	.979	1.021
	Health	.093	.059	.096	1.580	.115	.892	1.121
	Education	-.052	.031	-.098	-1.645	.101	.916	1.092
	Race	-.085	.063	-.080	-1.347	.179	.934	1.070
	Tenure	-.059	.040	-.091	-1.460	.145	.847	1.181

a. Dependent Variable: Aver Extrinsic Work Values

b. Predictors: (Constant), Tenure, Gender, Race, Education, Health

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson			
					R Square Change	F Change	Sig. F Change	
1	.249[a]	.062	.043	.628996016199853	.062	3.225	.004	2.266

a. Dependent Variable: Aver Extrinsic Work Values

b. Predictors: (Constant), Age, Gender, Race, Education, Health, Tenure

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.		
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2.329	.205		11.349	.000		
	Gender	-.040	.074	-.031	-.547	.585	.974	1.026
	Health	.135	.060	.139	2.249	.025	.840	1.191
	Education	-.049	.031	-.093	-1.565	.119	.915	1.093
	Race	-.100	.063	-.093	-1.584	.114	.929	1.077
	Tenure	.024	.049	.037	.484	.629	.557	1.795
	Age	-.181	.063	-.217	-2.878	.004	.561	1.781

a. Dependent Variable: Aver Extrinsic Work Values

b. Predictors: (Constant), Age, Gender, Race, Education, Health, Tenure

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson			
					R Square Change	F Change	Sig. F Change	
1	.206[a]	.043	.026	.529886967711602	.043	2.616	.025	1.753

a. Dependent Variable: Average Intrinsic Work k Values

b. Predictors: (Constant), Tenure, Gender, Race, Education, Health

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.		
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.386	.173		8.022	.000		
	Gender	.019	.062	.018	.305	.760	.979	1.021
	Health	.082	.049	.101	1.678	.094	.892	1.121
	Education	-.054	.026	-.122	-2.052	.041	.916	1.092
	Race	.026	.053	.029	.492	.623	.934	1.070
	Tenure	.069	.034	.127	2.050	.041	.847	1.181

a. Dependent Variable: Average Intrinsic Work k Values

b. Predictors: (Constant), Tenure, Gender, Race, Education, Health

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson			
					R Square Change	F Change	Sig. F Change	
1	.239[a]	.057	.038	.526740637707801	.057	2.960	.008	1.775

a. Dependent Variable: Average Intrinsic Work Values

b. Predictors: (Constant), Age, Gender, Race, Education, Health, Tenure

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.372	.172		7.987	.000		
	Gender	.010	.062	.009	.155	.877	.974	1.026
	Health	.056	.050	.069	1.122	.263	.840	1.191
	Education	-.056	.026	-.127	-2.137	.033	.915	1.093
	Race	.035	.053	.039	.659	.510	.929	1.077
	Tenure	.018	.041	.033	.430	.668	.557	1.795
	Age	.112	.053	.161	2.127	.034	.561	1.781

a. Dependent Variable: Average Intrinsic Work Values

b. Predictors: (Constant), Age, Gender, Race, Education, Health, Tenure

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson			
					R Square Change	F Change	Sig. F Change	
1	.290[a]	.084	.068	.638361675127968	.084	5.385	.000	1.682

a. Predictors: (Constant), Tenure, Gender, Race, Education, Health

b. Dependent Variable: Average Altruistic Work Values

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.		
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2.843	.208		13.664	.000		
	Gender	.023	.075	.017	.309	.758	.979	1.021
	Health	-.032	.059	-.032	-.540	.590	.892	1.121
	Education	-.065	.032	-.120	-2.054	.041	.916	1.092
	Race	-.039	.064	-.036	-.616	.539	.934	1.070
	Tenure	-.143	.040	-.215	-3.546	.000	.847	1.181

a. Dependent Variable: Average Altruistic Work Values

b. Predictors: (Constant), Tenure, Gender, Race, Education, Health

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson			
					R Square Change	F Change	Sig. F Change	
1	.338[a]	.114	.096	.628793906505712	.114	6.294	.000	1.663

a. Dependent Variable: Average Altruistic Work Values

b. Predictors: (Constant), Age, Gender, Race, Education, Health, Tenure

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.		
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2.867	.205		13.978	.000		
	Gender	.040	.074	.030	.537	.592	.974	1.026
	Health	.014	.060	.014	.235	.814	.840	1.191
	Education	-.061	.031	-.113	-1.974	.049	.915	1.093
	Race	-.055	.063	-.050	-.870	.385	.929	1.077
	Tenure	-.052	.049	-.079	-1.070	.285	.557	1.795
	Age	-.199	.063	-.232	-3.165	.002	.561	1.781

a. Dependent Variable: Average Altruistic Work Values

b. Predictors: (Constant), Age, Gender, Race, Education, Health, Tenure

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson			
					R Square Change	F Change	Sig. F Change	
1	.376[a]	.141	.127	.556	.141	9.691	.000	1.889

a. Dependent Variable: Average Prestige Work Values

b. Predictors: (Constant), Tenure, Gender, Race, Education, Health

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.		
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2.983	.181		16.451	.000		
	Gender	.021	.065	.018	.322	.747	.979	1.021
	Health	.024	.051	.026	.461	.645	.892	1.121
	Education	-.054	.028	-.110	-1.945	.053	.916	1.092
	Race	-.064	.055	-.065	-1.163	.246	.934	1.070
	Tenure	-.192	.035	-.321	-5.463	.000	.847	1.181

a. Dependent Variable: Average Prestige Work Values

b. Predictors: (Constant), Tenure, Gender, Race, Education, Health

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson			
					R Square Change	F Change	Sig. F Change	
1	.394[a]	.155	.138	.553	.155	8.984	.000	1.839

a. Dependent Variable: Average Prestige Work Values

b. Predictors: (Constant), Age, Gender, Race, Education, Health, Tenure

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.		
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2.997	.180		16.626	.000		
	Gender	.031	.065	.026	.479	.632	.974	1.026
	Health	.052	.053	.058	.982	.327	.840	1.191
	Education	-.051	.027	-.106	-1.880	.061	.915	1.093
	Race	-.074	.055	-.075	-1.338	.182	.929	1.077
	Tenure	-.137	.043	-.228	-3.176	.002	.557	1.795
	Age	-.121	.055	-.157	-2.195	.029	.561	1.781

a. Dependent Variable: Average Prestige Work Values

b. Predictors: (Constant), Age, Gender, Race, Education, Health, Tenure

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson			
					R Square Change	F Change	Sig. F Change	
1	.329[a]	.108	.093	.779	.108	7.136	.000	1.887

b. Predictors: (Constant), Tenure, Gender, Race, Education, Health

a. Dependent Variable: Average Social Value

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics			
		B	Std. Error	Beta			Partial	Part	Tolerance	VIF
1	(Constant)	1.605	.254		6.325	.000				
	Gender	-.096	.091	-.059	-1.058	.291	-.062	-.058	.979	1.021
	Health	.168	.072	.136	2.324	.021	.134	.128	.892	1.121
	Education	-.027	.039	-.041	-.710	.478	-.041	-.039	.916	1.092
	Race	-.171	.078	-.126	-2.207	.028	-.128	-.122	.934	1.070
	Tenure	.223	.049	.271	4.533	.000	.256	.250	.847	1.181

Dependent variable: social work values

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson			
					R Square Change	F Change	Sig. F Change	
1	.363[a]	.132	.114	.769	.132	7.431	.000	1.903

a. Predictors: (Constant), Age, Gender, Race, Education, Health, Tenure

b. Dependent Variable: Average Social Values

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.		
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.579	.251		6.292	.000		
	Gender	-.114	.090	-.070	-1.269	.205	.974	1.026
	Health	.117	.073	.095	1.594	.112	.840	1.191
	Education	-.031	.038	-.046	-.816	.415	.915	1.093
	Race	-.154	.077	-.113	-2.005	.046	.929	1.077
	Tenure	.124	.060	.150	2.062	.040	.557	1.795
	Age	.218	.077	.206	2.838	.005	.561	1.781

a. Dependent Variable: Average Social Values

Commitment

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson			
					R Square Change	F Change	Sig. F Change	
1	.413[a]	.170	.156	.834228979594404	.170	12.076	.000	1.958

a. Predictors: (Constant), Tenure, Gender, Race, Education, Health

b. Dependent Variable: Average affect Commitment

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.		
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	4.314	.272		15.864	.000		
	Gender	-.174	.097	-.096	-1.788	.075	.979	1.021
	Health	.022	.077	.016	.288	.773	.892	1.121
	Education	.021	.041	.028	.498	.619	.916	1.092
	Race	-.078	.083	-.052	-.939	.348	.934	1.070
	Tenure	-.369	.053	-.404	-6.989	.000	.847	1.181

a. Dependent Variable: Average affect Commitment

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson			
					R Square Change	F Change	Sig. F Change	
1	.454[a]	.207	.190	.817234812620300	.207	12.712	.000	2.036

a. Predictors: (Constant), Age, Gender, Race, Education, Health, Tenure

b. Dependent Variable: Average affect Commitment

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.		
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	4.350	.267		16.316	.000		
	Gender	-.149	.096	-.082	-1.562	.119	.974	1.026
	Health	.091	.078	.066	1.171	.243	.840	1.191
	Education	.026	.040	.035	.635	.526	.915	1.093
	Race	-.101	.082	-.067	-1.241	.216	.929	1.077
	Tenure	-.233	.064	-.255	-3.651	.000	.557	1.795
	Age	-.299	.082	-.254	-3.654	.000	.561	1.781

a. Dependent Variable: Average affect Commitment

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson			
					R Square Change	F Change	Sig. F Change	
1	.359[a]	.129	.114	.840869418387795	.129	8.716	.000	1.811

a. Predictors: (Constant), Tenure, Gender, Race, Education, Health

b. Dependent Variable: Average Continuance Commitment

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.		
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	4.047	.274		14.762	.000		
	Gender	-.022	.098	-.012	-.224	.823	.979	1.021
	Health	-.132	.078	-.098	-1.695	.091	.892	1.121
	Education	.039	.042	.053	.936	.350	.916	1.092
	Race	-.003	.084	-.002	-.039	.969	.934	1.070
	Tenure	-.298	.053	-.332	-5.606	.000	.847	1.181

a. Dependent Variable: Average Continuance Commitment

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.418[a]	.175	.158	.819984825757998	.175	10.333	6	293	.000	1.868

a. Predictors: (Constant), Age, Gender, Race, Education, Health, Tenure

b. Dependent Variable: Average Continuance Commitment

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.		
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	4.086	.267		15.275	.000		
	Gender	.005	.096	.003	.056	.955	.974	1.026
	Health	-.056	.078	-.041	-.712	.477	.840	1.191
	Education	.045	.041	.061	1.098	.273	.915	1.093
	Race	-.029	.082	-.019	-.353	.724	.929	1.077
	Tenure	-.148	.064	-.164	-2.312	.021	.557	1.795
	Age	-.330	.082	-.285	-4.021	.000	.561	1.781

a. Dependent Variable: Average Continuance Commitment

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson			
					R Square Change	F Change	Sig. F Change	
1	.363[a]	.132	.117	.718	.132	8.946	.000	1.725

a. Predictors: (Constant), Tenure, Gender, Race, Education, Health

b. Dependent Variable: Average Normative Commitment

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.		
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	3.836	.234		16.390	.000		
	Gender	.064	.084	.042	.766	.444	.979	1.021
	Health	-.136	.066	-.117	-2.040	.042	.892	1.121
	Education	.020	.036	.031	.553	.581	.916	1.092
	Race	.050	.072	.039	.694	.488	.934	1.070
	Tenure	-.249	.045	-.324	-5.485	.000	.847	1.181

a. Dependent Variable: Average Normative Commitment

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson			
					R Square Change	F Change	Sig. F Change	
1	.377[a]	.142	.124	.715	.142	8.081	.000	1.743

a. Predictors: (Constant), Age, Gender, Race, Education, Health, Tenure

b. Dependent Variable: Average Normative Commitment

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.		
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	3.851	.233		16.512	.000		
	Gender	.075	.084	.049	.898	.370	.974	1.026
	Health	-.105	.068	-.091	-1.541	.124	.840	1.191
	Education	.022	.035	.035	.618	.537	.915	1.093
	Race	.039	.071	.031	.551	.582	.929	1.077
	Tenure	-.189	.056	-.246	-3.390	.001	.557	1.795
	Age	-.132	.072	-.133	-1.842	.066	.561	1.781

a. Dependent Variable: Average Normative Commitment

Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**	**Durbin-Watson**			
					R Square Change	F Change	Sig. F Change	
1	.479[a]	.230	.217	.574	.230	17.537	.000	1.936

a. Predictors: (Constant), Tenure, Gender, Race, Education, Health

b. Dependent Variable: Average Job Satisfaction

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.		
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.903	.187		10.176	.000		
	Gender	-.033	.067	-.026	-.499	.618	.979	1.021
	Health	-.031	.053	-.031	-.580	.562	.892	1.121
	Education	.005	.028	.010	.180	.857	.916	1.092
	Race	.007	.057	.006	.117	.907	.934	1.070
	Tenure	.314	.036	.481	8.654	.000	.847	1.181

a. Predictors: (Constant), Tenure, Gender, Race, Education, Health

b. Dependent Variable: Average Job Satisfaction

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson			
					R Square Change	F Change	Sig. F Change	
1	.500[a]	.250	.235	.567	.250	16.271	.000	1.957

a. Predictors: (Constant), Age, Gender, Race, Education, Health, Tenure

b. Dependent Variable: Average Job Satisfaction

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.		
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.884	.185		10.185	.000		
	Gender	-.047	.066	-.036	-.703	.483	.974	1.026
	Health	-.068	.054	-.069	-1.249	.212	.840	1.191
	Education	.002	.028	.004	.085	.932	.915	1.093
	Race	.019	.057	.018	.337	.736	.929	1.077
	Tenure	.241	.044	.370	5.460	.000	.557	1.795
	Age	.159	.057	.190	2.808	.005	.561	1.781

a. Predictors: (Constant), Age, Gender, Race, Education, Health, Tenure

b. Dependent Variable: Average Job Satisfaction