



THE INFLUENCE OF ORGANISATIONAL CULTURE ON THE
HAPPINESS OF EMPLOYEES IN THE ICT INDUSTRY

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**THE INFLUENCE OF ORGANISATIONAL CULTURE ON THE HAPPINESS OF
EMPLOYEES IN THE ICT INDUSTRY**

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DECLARATION

I, Lama Ndai Arnaud 210209909, hereby declare that this dissertation is my own independent work and has not been previously submitted for assessment or completion of any post graduate qualification to another University or for another qualification.

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ABSTRACT

Based on the increasing importance that information and communication technologies (ICT) plays in most global economies, the high demand for ICT employees and the influence of organisational culture on the success of ICT businesses, the purpose of this study was to provide ICT managers with ways to retain and keep their employees satisfied and happy in their jobs. Therefore, the primary objective of this study was to identify and empirically test the influence of various factors of organisational culture on *Happiness* and *Job satisfaction* of employees in the ICT industry in South Africa.

After completing a comprehensive literature review, it appeared that limited research had been conducted on the happiness of employees in the ICT industry. Numerous factors were identified as influencing happiness; however, due to the difficulty to assess some of these factors, this study only focused on the influence of organisational culture on the happiness and in return the job satisfaction of employees. All the factors influencing organisational culture were reviewed in the literature and 13 independent variables were identified and hypothesised to influence the mediating variable *Happiness* and the dependent variable *Job satisfaction*.

All the variables in this study were clearly conceptualised and operationalised. Valid and reliable items sourced from various measuring instruments used in previous studies, were used to operationalise these variables. Furthermore, numerous items were self-generated from secondary sources. A convenience sampling method was used to identify the respondents and a structured questionnaire was completed online by respondents. The data collected from 187 usable questionnaires was subjected to various statistical analyses using the software program Statistica. A Confirmatory Factor Analysis was used to assess the validity of the dependent variable *Job satisfaction* and the mediating variable *Happiness* of this study, whereas an Exploratory Factor Analysis was used to assess the validity of the independent variables. To confirm the reliability of all the variables investigated, Cronbach's alpha coefficients were calculated.

Due to the large number of variables and the small number of respondents, conducting a factor analysis on the independent variables was not possible. This problem was solved by the use of the item parcelling method. After the item

parcelling was conducted and the factor analysis conducted, only seven out of the 13 factors loaded together as expected. All the parcels measuring these factors did not load together as expected and where necessary these factors were renamed and operationalised again.

The sample data was summarised using descriptive statistics. The majority of respondents reported that they were satisfied with their jobs and almost half of the respondents reported being happy with their lives. Pearson's correlation coefficients were used to establish the degree of relationship between the factors investigated in this study. After the Multiple Regression Analysis was conducted, it was found that three independent variables influence the *Happiness* of employees in the ICT industry, namely, *Customer focus*, *Strategic direction and intent* and *Family orientation and atmosphere*. *Happiness* was also found to have a positive influence on the *Job satisfaction* of ICT employees.

The influence of various selected demographic variables on the dependent, mediating and independent variables was investigated by means of an Analysis of Variance (ANOVA). The statistical significance between the differences in means scores was measured using the Bonferroni Post-hoc test. The *Population group* of the respondents, the *Years of service* and their *Age group* were found to significantly influence some of the independent variables and mediating variables investigated in this study. No relationship was found between any demographic variables and the dependent variable *Job satisfaction*.

Limited studies on the influence of organisational culture on the happiness of employees and more particularly those in the ICT industry were found in the literature. This study has made a contribution to the field of happiness research by understanding the factors influencing the happiness and job satisfaction of employees in the ICT industry. As a result, the study presents recommendations and suggestions to assist ICT businesses to improve their organisational culture and at the same time enhance the happiness and job satisfaction of their employees.

KEYWORDS: ICT employees, Job satisfaction, Happiness, Organisational culture.

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CHAPTER 1

INTRODUCTION, PROBLEM STATEMENT AND DEMARCATION OF THE STUDY

1.1 INTRODUCTION AND BACKGROUND OF THE STUDY

Information and communication technologies (ICT) can be described as a set of applications and technologies that allow electronic storing, processing and transfer of information to a large variety of customers (Cohen, Salomon & Nijkamp 2002: 31-52). The concepts of Information Technology (IT) and information and communication technologies (ICT) will be referred to as ICT in this study. ICT has become the foundation of every sector of any economy all over the world (Kramer, Jenkins & Katz 2007: 7) and this can be explained by the fact that ICT supports business operations. Hence ICT improves productivity; allows immediate connectivity in terms of voice, data and visual; leads to the improvement of efficiency, transparency and accuracy of operational activities. ICT substitutes more expensive ways of communicating and conducting business transactions. ICT also enlarges the geographic scope of potential markets and channels and caters for different business knowledge and information (Kramer, *et al.* 2007: 7).

During the past twenty years, ICT has had a vital impact on the way people around the world live and work. ICT has replaced traditional jobs such as typists, telegraph operators and data capture clerks. Even the postal services are under threat due to the increasing role of ICT. A world without a cell phone, television, the Internet or social media is hardly conceivable. Today, in the modern economy of most countries, each organisation allows a budget for ICT expenditure (Breitenbach, Aderibigbe & Muzungu 2005:1). Avgerou (2001: 43-63) described ICT as an absolute requirement for taking part in today's global economy and therefore the role of ICT in the emerging global market cannot be exaggerated. ICT has also been recognised to have the ability to integrate world economies hence ICT defeats the barriers created by time and distance.

In South Africa, ICT attracted the interest of the government due to its potential contribution to economic growth, employment and development. A positive relationship has been found in South Africa between the use of ICT and the gross domestic product (Breitenbach, *et al.* 2005: 14). Smith and Speight (2006: 123-129)

indicated that South Africa was ranked the 20th largest market for ICT goods and services, hence revealing the national importance of this industry. The South African government recognised the ICT sector as one of the nation's vital sectors because of the importance and the role played by the ICT in the country's labour market. The importance of ICT in South Africa is mainly based on two reasons, namely, the creation of employment opportunities and the attraction of external investment to the country (Smith & Speight 2006: 123-129).

ICT has been shown to drive our 21st century digital economy. ICT professionals therefore represent a vital asset in many organisations by creating new products and services, solving business problems and maintaining a competitive advantage (Westlund & Hannon 2008: 4). According to Sanjay (2006: 2) the recruitment, retention and retraining of skilled staff represent an essential task in the ICT industry due to the high demand for ICT professionals. Employers in the ICT industry face a number of challenges in retaining their staff, because the demand for ICT professionals far surpasses the supply. Qualified and experienced ICT professionals are therefore cherished because they are in short supply. Furthermore, many organisations have struggled to retain ICT employees the past decades (Mda 2010: 18).

ICT professionals in competitive areas demonstrated more loyalty to their own careers and personal development than to their organisations (Westlund & Hannon 2008: 4). According to the Information and Communication Technology Council (2008: 147), it is important for information and communication companies to retain their employees in order to maintain long-term stability and success. This can be explained by the current labour market which is characterised by an aging population, an imbalance in skilled employees and increasing workforce mobility. In South Africa, the ICT industry is facing a critical shortage of skills but it needs to improve productivity. Oracle South Africa manager, Pieter Bensch testifies that his company alone is seeking about 1 700 new ICT employees across Africa, the Middle East and Europe (Harris 2011). Skills retention has been turned into a scientific discipline in the ICT industry due to dynamic competition for skills. Most ICT businesses agree that career opportunities and job satisfaction are as vital for professional employees' retention as remuneration (Harris 2011).

Tietjen and Myers (1998: 226-231) demonstrated that increasing the job satisfaction of workers represents a vital task of management since confidence, loyalty and the improvement of quality in the output of the employed are created by satisfaction. According to Westlund and Hannon (2008: 11) there is a significant predictive relationship between the job satisfaction of software developers and their turnover intention. Based on the relationship between employee turnover and job satisfaction, employers are recommended to increase the job satisfaction of employees in order to reduce their level of turnover (Kreitner, Kinicki, & Buelens 1999: 200). Aamodt (2004: 339) added that employees with low job satisfaction are more willing to quit their jobs and change careers than satisfied employees.

Job satisfaction will be defined in this study as a positive feeling that people have about their work, based on the evaluation of the characteristics of the job (Robbins, Odendaal & Roodt 2003: 72). Employee satisfaction has a vital impact on productivity, quality and performance in an organisation. Understanding the impact of employee satisfaction on an industry is complex due to the large number of parameters/variables involved. Various theories have been presented to explain the impact of employee satisfaction on the success of organisations, namely, revenue, effectiveness, efficiency and quality, amongst others (Ahsan 2009: 163). Argyle (1989: 1), in his work demonstrated that job satisfaction is highly correlated with overall happiness and therefore happiness can be considered as one of the main parameters of employee satisfaction.

The concepts 'subjective well-being' and 'happiness' will be utilised interchangeably in this study and will be defined as the extent to which individuals weigh the overall quality of their life as pleasant (Blanchflower & Oswald 2004: 1360). Across cultures, happiness is the most significant element in people's lives and is more essential than success. It has been revealed that happiness is connected to numerous positive outcomes such as enjoyable work, performance and health (Diener, Suh, Lucas, & Smith 1999: 276-302). Additionally, happiness is not only important for life events, but also plays a crucial role in the accomplishment of positive outcomes such as marriage, comfortable income, superior mental health and long life (Lyubomirsky, King & Diener 2005: 803-855). Diener and Biswas-Diener (2008: 25) argue that positive emotions make objectives appear easier to accomplish and that happiness leads to people being more enthusiastic about achieving their goals. Due to the

difficulty to find items to assess some factors of happiness, the complexity to assess them and the time constraint, this study will only focus on the institutional factor, organisational culture. Organisational culture has been chosen because the success of the biggest ICT companies such as Google and Facebook depends on it (Chatterjee 2012). Organisational culture is an abstraction, however the advantages that are created in social and organisational situations originating from organisational culture are powerful (Schein 2010: 7). Organisational culture, in this study will be defined as a set of shared meaning held by employees that differentiates a business from other businesses (Robbins 2009: 294).

The literature review (Tang, Kim & O'Donald 2000: 540; Bradley, McDonald & Brown 2010: 3; Jung, Scott, Davies, Bower, Whalley, McNally & Manion 2009: 53- 63) revealed over 250 factors influencing organisational culture. However, for the purpose of this study, the focus will be on 13 factors that could influence organisational culture namely adaptability (Creating change, customer focus, organisational learning), consistency with core values and agreement, strategic direction and intent (vision, mission, goals and objectives), involvement (empowerment, team orientation, capacity development), family orientation, open communication and artefacts and symbols. These factors have been demonstrated to be more relevant for the ICT industry.

The research objective of this study is to determine if organisational culture of businesses in the ICT industry has an influence in respect to their employees' happiness and in return their job satisfaction. In other words, does organisational culture play a significant role in the happiness of employees in the ICT industry and does their happiness influence their job satisfaction?

The purpose of this research is therefore to establish whether there is a relationship between organisational culture and happiness of employees in the ICT industry in South Africa, as well as if there is a relationship between their happiness and their job satisfaction. This chapter will present a background to the study. The definition of the main concepts used in this research will be provided. The problem statement, the scope and demarcation of the research, the purpose of the study and the different research objectives will constitute the following sections of this chapter. A theoretical model is proposed followed by several research questions and hypotheses. The

primary and secondary research objectives of the research are then discussed. Finally, this section is concluded with a summary of the structure of the dissertation.

1.2 DEFINITION OF CONCEPTS

The focus of the study is on the influence of *organisational culture* on the *happiness* of employees in the ICT industry, and the influence of their *happiness* on their *job satisfaction*, therefore, clear definitions of these concepts are required.

1.2.1 THE ICT INDUSTRY

ICT will be defined as a group of technologies and applications that permit electronic processing, storing and transfer of information to a large variety of customers (Cohen *et al.* 2002: 31-52).

1.2.2 HAPPINESS

The words happiness and subjective well-being will be used synonymously in this research, and will be defined as the extent to which a person weighs the overall quality of his/her life as enjoyable (Blanchflower and Oswald 2004: 1360).

1.2.3 JOB SATISFACTION

Job satisfaction will be defined in this study as a positive feeling that individuals have about their job, based on the assessment of the characteristics of the job (Robbins *et al.* 2003: 72).

1.2.4 ORGANISATIONAL CULTURE

Organisational culture, for the purpose of this study will be defined as a set of shared meaning held by employees that differentiates a business from other businesses (Robbins 2009: 294). After the definitions of the important concepts of this study, the following section will elaborate on the problem statement of this research.

1.3 PROBLEM STATEMENT

Even though the ICT industry has been shown to occupy an important place in our 21st century digital economy, the retention of talented ICT staff has been a huge challenge over several past decades (Westlund, & Hannon 2008: 4). With the existing lack of ICT skilled labour, businesses should make sure they retain their ICT

staff. The result of losing qualified employees can be catastrophic for the organisation as they leave with their expertise, tacit knowledge and intellectual capital (Information and Communication Technology Council 2008: 147). ICT professionals revealed more loyalty to their own personal improvement and careers than to their employers and they are constantly solicited by other organisations (Westlund, & Hannon 2008: 4). Therefore, ensuring job satisfaction represents a vital task of management since satisfaction relates to confidence, loyalty and eventually advances quality in the output of the employed (Tietjen and Myers 1998: 226-231). Aamodt (2004: 339) indicated that the probability that dissatisfied employees will quit their jobs and change careers is higher than that of satisfied employees.

Regardless of the fact that there are many factors influencing job satisfaction, happiness is vital as it can be the source of increased productivity of employees in organisations (Saari and Judge 2004: 1). Happiness is considered across cultures as the central component in people's lives and is more significant than success (Diener *et al.* 1999: 276-302). Furthermore, it has been shown that happy employees equal happy customers and happy customers lead to a profitable and sustainable business (Blue papers 2011: 4). Due to the difficulty of finding items to assess some factors of happiness, the complexity of assessing them and the time constraint, this study will only focus on the influence of organisational culture on happiness. Organisation culture is vital for the success of ICT industry hence the importance of this research and the questions: *Does organisational culture have an influence on employees' happiness in the ICT industry and does employees' happiness influence their job satisfaction?* The following part of this chapter will discuss the scope and demarcation of the study.

1.4 SCOPE AND DEMARCATION OF THE STUDY

Several factors have been identified as influencing the *Job Satisfaction* of an employee, however the focus of this study will be on the influence of *Happiness* on *Job Satisfaction* due to the fact that happiness can be considered as the imperative component in people's lives and across nations is more essential than success (Diener *et al.* 1999: 276-302). Due to the time constraints, the difficulty in finding items to assess some factors of happiness and the complexity of assessing them,

this study will focus only on the influence of organisational culture on happiness because organisation culture is essential for the success of ICT industry.

The empirical research will be limited to employees working in the ICT industry in South Africa. The ICT industry sector was chosen because of its growing significance in the way individuals are living and interacting with each other globally (Breitenbach *et al.* 2005: 1). After a clear discussion on the scope and demarcation of the study, the objectives of the study will be presented.

1.5 RESEARCH OBJECTIVES (RO)

This section consists of the formulation of the primary and secondary research objectives of this study as well as the different research questions and research hypotheses that will be addressed in this study. Finally, the relationships to be tested empirically will be illustrated in a theoretical model.

1.5.1 PRIMARY OBJECTIVE

The primary objective of this research is to explore and empirically test the influence of various components of organisational culture, considered in this study as the independent variables (*Adaptability, Strategic direction and intent, Consistency in core values and agreement, Involvement, Family orientation and atmosphere, Open communication and Artefacts and symbols*) identified in literature (Denison 2004: 65; Jyothibabu, Farooq & Pradhan 2010: 304; Kotrba, Gillespie, Schmidt, Smerek, Ritchie and Denison 2011: 5) on the mediating variable *Happiness* and the influence thereof on the *Job satisfaction* of employees (dependent variable) in the ICT industry in South Africa. The aim of this study is to have a clear understanding of these factors in order to improve the satisfaction and retention of employees in the ICT industry.

1.5.2 SECONDARY OBJECTIVES

In order to accomplish the primary research objective, the following secondary research objectives have been identified:

RO₁ To conduct a theoretical review into and identify the means of retaining ICT professionals.

- RO₂ To conduct a theoretical investigation and identify factors that influence the job satisfaction and happiness of employees in the ICT industry.
- RO₃ To identify factors that influence organisational culture in the ICT context.
- RO₄ To develop a measuring instrument that will assess empirically the relationship as defined in the hypothesised model.
- RO₅ To empirically test and analyse the hypothesised model by conducting a survey with ICT industry's employees in South Africa.
- RO₆ To suggest recommendations based on the findings of the statistical analysis to managers in the ICT industry so that they can improve their organisational culture and at the same time enhance the happiness and job satisfaction of their employees.

1.5.3 RESEARCH QUESTIONS

Based on the previous primary research objective and the aim of this research, the following research questions are identified:

- RQ₁ What are the major challenges faced by the ICT industry and how can it be addressed?
- RQ₂ What are the factors influencing the happiness and job satisfaction of employees in the ICT industry?
- RQ₃ What are the factors influencing organisational culture in the ICT industry?
- RQ₄ How can the influence of happiness on the job satisfaction of employees in the ICT industry be measured?
- RQ₅ What is the influence of organisational culture on employees' happiness in the ICT industry and what is the influence of their happiness on their job satisfaction?
- RQ₆ What recommendations can be made based on the findings of the statistical analysis?

Table 1.1: Summary of research questions and objectives

Research questions	chapters	Method
RQ ₁ What are the major challenges faced by the ICT industry and how can it be addressed? (RO ₁)	Chapter 2	Literature review
RQ ₂ What are the factors influencing the happiness and job satisfaction of employees in the ICT industry? (RO ₂)	Chapters 3 and 4	Literature review
RQ ₃ What are the factors influencing organisational culture in the ICT industry? (RO ₃)	Chapter 5	Literature review
RQ ₄ How can the influence of happiness on the job satisfaction of employees in the ICT industry be measured?(RO ₄)	Chapter 6	Design a questionnaire
RQ ₅ What is the influence of organisational culture on employees 'happiness in the ICT industry and what is the influence of their happiness on their job? (RO ₅)	Chapter 7	Survey and interview strategies
RQ ₆ What conclusion can be made based on the findings of the statistical analysis? (RO ₆)	Chapter 8	Analysis and conclusion

1.5.4 RESEARCH HYPOTHESES

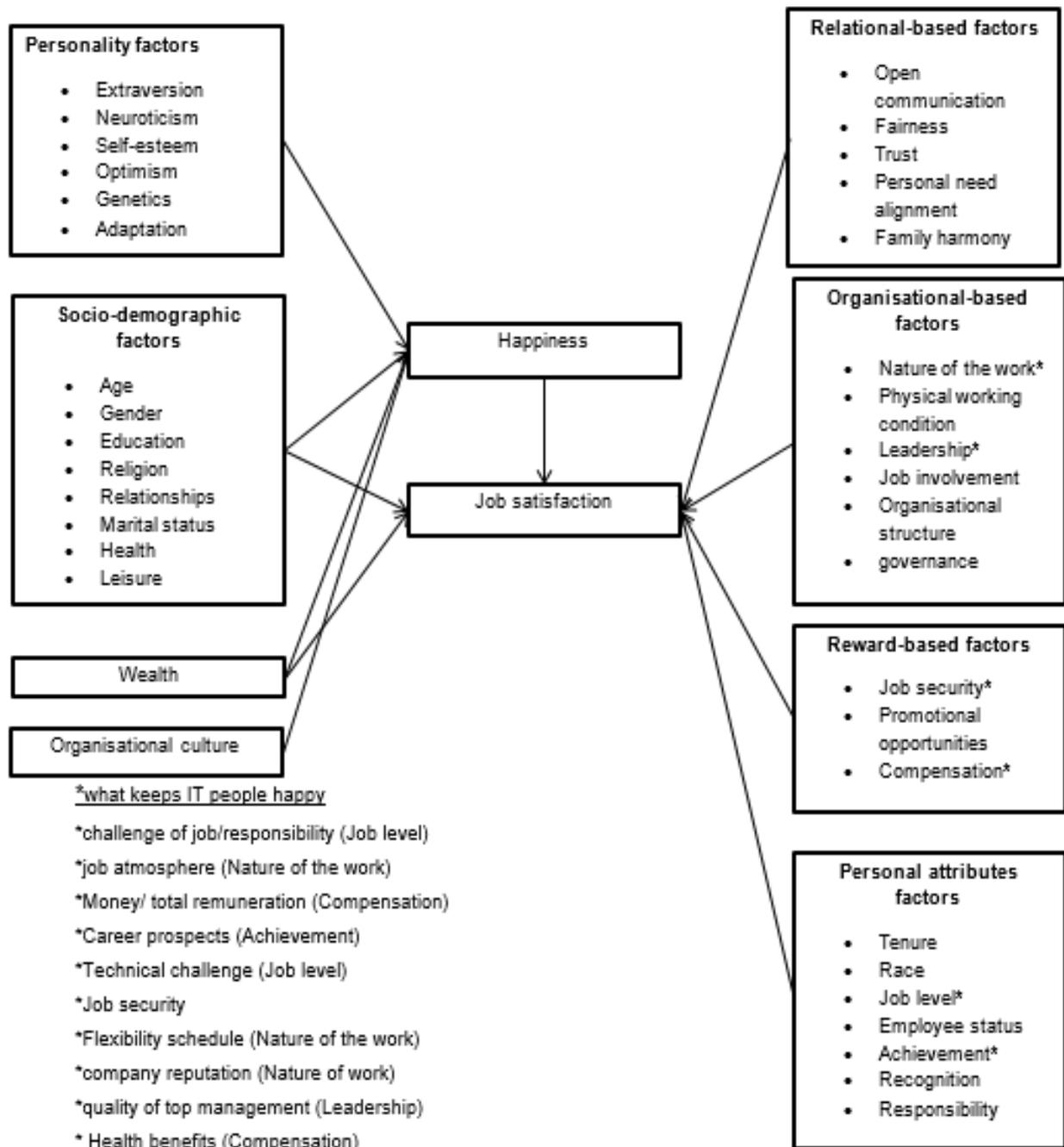
The following hypotheses have been formulated to denote the relationships to be tested in this study and will be presented in Figure 1.2:

- H¹: There is a positive relationship between *Happiness* and *Job Satisfaction*.
- H²: There is a positive relationship between *Adaptability (Creating change, Customer focus and Organisational learning)* and the *Happiness* of ICT employees.
- H^{2a}: There is a positive relationship between *Creating change* and the *Happiness* of ICT employees.
- H^{2b}: There is a positive relationship between *Customer focus* and the *Happiness* of ICT employees.
- H^{2c}: There is a positive relationship between *Organisational learning* and the *Happiness* of ICT employees.
- H³: There is a positive relationship between *Strategic direction and intent (Vision, Mission, Goals and objectives)* and the *Happiness* of ICT employees.
- H^{3a}: There is a positive relationship between *Vision* and the *Happiness* of ICT employees.
- H^{3b}: There is a positive relationship between *Mission* and the *Happiness* of ICT employees.
- H^{3c}: There is a positive relationship between *Goals and objectives* and the *Happiness* of ICT employees.
- H⁴: There is a positive relationship between *Consistency in Core value and Agreement* and the *Happiness* of ICT employees.
- H⁵: There is a positive relationship between *Involvement (Empowerment, Team Orientation, Capacity development)* and the *Happiness* of ICT employees.
- H^{5a}: There is a positive relationship between *Empowerment* and the *Happiness* of ICT employees.

- H^{5b}: There is a positive relationship between *Team Orientation* and the *Happiness* of ICT employees.
- H^{5c}: There is a positive relationship between *Capacity Development* and the *Happiness* of ICT employees.
- H⁶: There is a positive relationship between *Family Orientation and Atmosphere* and the *Happiness* of ICT employees.
- H⁷: There is a positive relationship between *Open Communication* and the *Happiness* of ICT employees.
- H⁸: There is a positive relationship between *Artefacts and Symbols* and the *Happiness* of ICT employees.

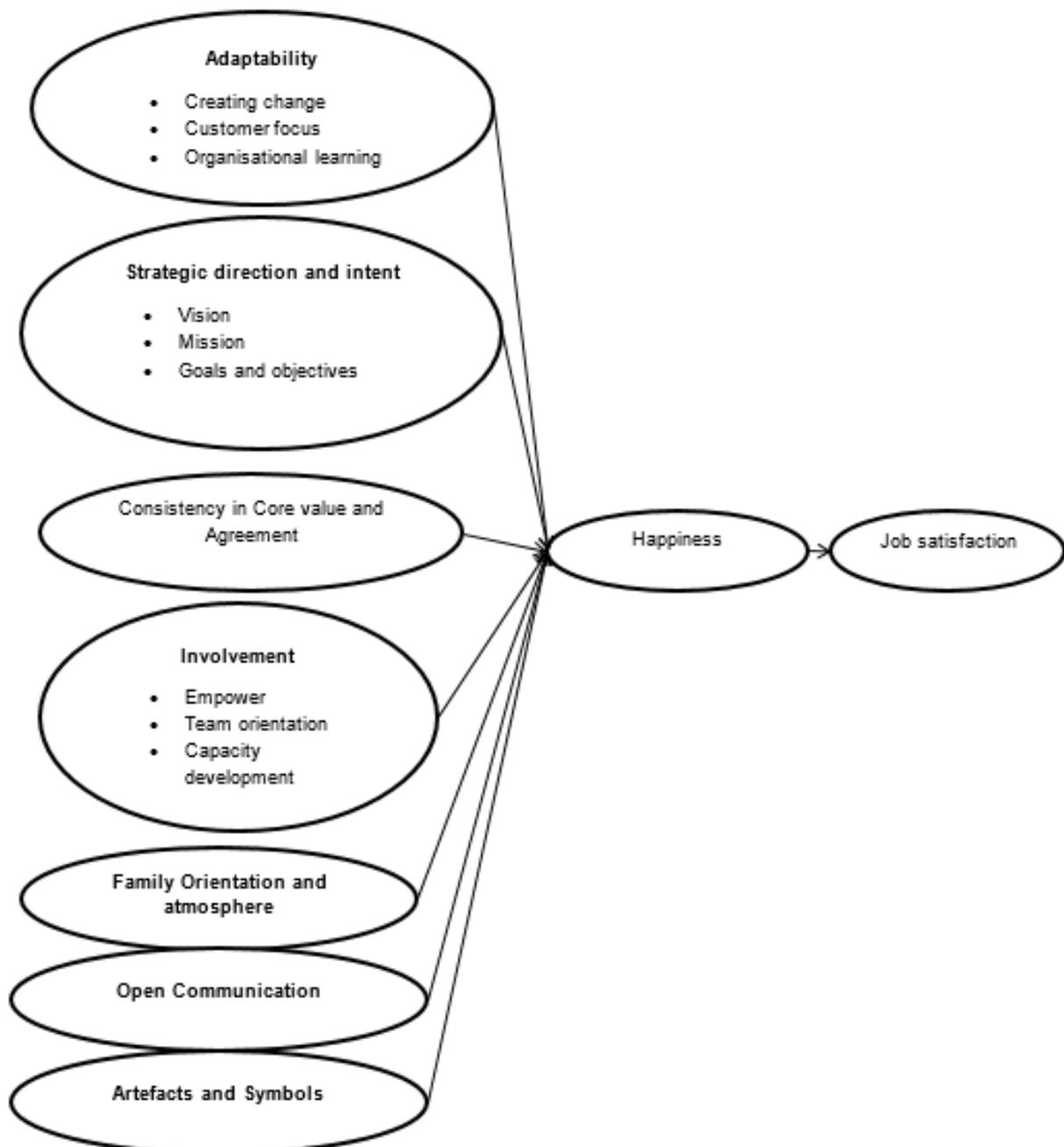
Based on the literature review, the following model represents the ideal theoretical model to evaluate the relationship between happiness and job satisfaction.

Figure 1.1: Ideal theoretical model: the influence of happiness on the job satisfaction of employees in the ICT industry



The model in Figure 1.1 will not be investigated in this study due to the fact that it is too big and there is page limitation for this study. Based on the scope of the study the proposed model will be the following.

Figure 1.2: Theoretical model: The influence of organisational culture on the happiness of employees in the ICT industry



1.6 RESEARCH DESIGN AND METHODOLOGY

In order to address the objectives of the study, secondary and primary research will be undertaken. They will be illustrated in the paragraphs below.

1.6.1 LITERATURE REVIEW

In order to have a better understanding of the theme being researched and to identify as many factors as possible that have an influence on the *Happiness* and the *Job satisfaction* of employees in the ICT industry in South Africa, a literature research will be conducted. From this secondary research a theoretical or hypothetical model will be proposed. In order to accomplish the secondary research, numerous sources will be consulted such databases available at the Nelson Mandela Metropolitan University Library which comprise Ebscohost: Academic Search Premier, E-journals, MasterFile Premier, Business Source Premier; Emerald Insight; Google searches, Google scholar.

1.6.2 PRIMARY RESEARCH

This section consists of the identification of the most appropriate research paradigm, the target population, sample and data collection, as well as the techniques that will be used to analyse the data statistically.

1.6.2.1 Research paradigm

There is a clear distinction for research study between qualitative research and quantitative research (Blumberg 2008: 191). The terms qualitative and quantitative generally relate to the type of data produced in the research process. Quantitative research refers to data in the form of numbers whereas qualitative research relates to data that are indicated in prose or textual forms. Quantitative and qualitative researches generally tend to use different methods. Random sample surveys produce quantifiable data that can be statistically examined with the main purpose of measuring, aggregating, modelling and predicting behaviour and relations (Garbarino & Holland 2009: 17).

Contextual or qualitative methods on the other hand are generally used for a specific locality, case or social setting and sacrifice range of population coverage and statistical generalisability in order to scrutinise issues in depth. Qualitative research comprises techniques such as participant observation, interviews and participatory tools that are frequently group-based and visual. The method generally used in qualitative research is open-ended questions that are formulated to capture judgements and perceptions and allow complex analyses and generally non-

quantifiable cause and effect processes (Garbarino & Holland 2009: 17). Quantitative research will be used in the study under investigation because the study will be on a relatively large sample; the hypotheses will be tested and relationships will be examined.

1.6.2.2 Population, sampling and data collection

Yount (2006: 1) defines a population as all the elements that someone wants to study. The population of this study will be employees working in the ICT industry. A sample can be defined as a subgroup of the population selected to be participants of a study (Landreneau 2012: 1). Yount (2006: 1) defined sampling as the method of picking a group of subjects for a study in such a way that individuals will be an illustration of the group from which they were chosen. The sample of the study under investigation is composed of employees working in the ICT industry in South Africa.

Two major groups of sample design have been identified, namely, probability and non-probability sampling. Probability sampling comprises some form of haphazard selection in the choice of elements. This group of sampling is usually subject to and indicates greater confidence concerning the representativeness of the population. In probability sampling, each element in the population has an equal chance to be chosen. It comprises simple random sampling, stratified random sampling, cluster sampling and systematic sampling. In non-probability sampling, on the other hand, the components that make up the sample are chosen by using non-random techniques. This type of sampling does not produce representative samples as accurately as probability sampling. Non-probability sampling includes three main methods, namely, convenience sampling, quota sampling and purposive sampling (Landreneau 2012: 1).

Convenience sampling will be used for the purpose of this study, and can be defined as the process of selecting respondents whom the researcher deems to be suitable. This type of sampling has the advantage of reducing time and the cost of collecting information (American Statistical Association 2003: 3). Employees working in the ICT industry in South Africa were invited to participate in the study. A structured questionnaire was sent online to potential respondents during the period of July to August 2013.

(a) The measuring instrument

The measuring instrument that will be used in this study will include four parts. The first part will comprise a comprehensive description of the purpose of the study, and the type of information requested. The second part will consist of statements relating to the different factors influencing organisational culture as well as happiness and job satisfaction. A 7-point Likert-type interval scale will be utilised where 1 = strongly disagree and 7 = strongly agree. Each respondent will be asked to specify the extent to which he /she agreed with the statement.

The third part will ask for demographic information concerning both the respondent and the ICT business. The information requested, relating to the respondent, will include the respondent's age and gender. Respondents will also be asked how long they have been working in the ICT business. Finally, the last section of the questionnaire will thank the respondents for their time.

1.6.2.3 Data analysis

This section will start by the evaluation of the reliability and validity of the measuring instrument. Lewis (1999: 3) defines reliability as the extent to which measurement tested under the same conditions will provide similar results. According to Bryman and Bell (2007: 163), there are three components considered when assessing the reliability of a measure, namely, stability, internal consistency and inter-observer consistency. Internal consistency is defined as the degree to which all the items in a test evaluate the same concept or construct and therefore it is linked to the inter-relatedness of the items within the test (Travakol & Dennick 2011: 1). The Cronbach alpha coefficient will be used to measure the reliability of data utilised in this study.

Validity on the other hand can be described as the extent to which the measured items mirror the characteristics they are supposed to measure (Lewis 1999: 4). Exploratory Factor Analysis and Confirmatory Factor Analysis (CFA) are the two main statistical techniques used to evaluate validity (Atkinson *et al.* 2011: 569).

Exploratory Factor Analysis (EFA) is a statistical approach which is used to examine the internal reliability and validity of a measure. EFA is normally used for the examination of construct validity in cases where the relationships amongst different variables are ambiguous or unknown (Atkinson *et al.* 2011: 569). According to Suhr

(2006:2), the aims of Exploratory Factor Analysis are to determine latent constructs in the set of variables, explain variances that occur amongst the variables, and define the factors or latent constructs.

A Confirmatory Factor Analysis (CFA) on the other hand, can be defined as a statistical method used to prove the factor structure of a group of identified variables (Suhr 2006: 1). CFA enables the researcher to test the relationship between dependent variables and independent variables. The researcher in Confirmatory Factor Analysis uses information about the theory, empirical research, or both, suggests the relationship pattern, a priori, and then tests the hypothesis statistically (Suhr 2006: 1).

A Confirmatory Factor Analysis will be done on the dependent and mediating variables of this study. Confirmatory Factor Analysis will be used for two reasons. Firstly, it is well-known in the literature that *Job satisfaction* and *Happiness* are independent factors. Secondly, a Confirmatory Factor Analysis is common when items from previous research are used to assess certain factors (Reinard 2006: 428) as it is the case in this study. On the other hand, an Exploratory Factor Analysis (EFA) will be done to evaluate the validity of the scales measuring the independent variables of this study. Exploratory Factor Analysis will be used on the independent variables because many of the scales that will be used to assess these variables have not been confirmed to the same extent as the scales measuring the dependent and the mediating variables.

Numerous descriptive statistics will be calculated in order to summarise the sample data. These statistics are the mean, standard deviation and frequency distribution. The coefficient of Pearson correlation will be used in this study to evaluate the relationship between different factors under examination. Correlation relates to the procedure for deciding whether or not relationships exist between two variables. Correlation coefficient can therefore be defined as a single summary number that enables a clear understanding about how closely one variable is connected to another variable (Higgins 2005: 1).

A Multiple Regression Analysis will be done to establish the influence of the different factors identified on the dependent variables happiness and job Satisfaction. Multiple Regression Analysis can be described as a statistical instrument used to appreciate

the relationship between two or more variables. Multiple Regression Analysis comprises a variable to be clarified or dependent variables and additional, descriptive variables that are linked to changes in the dependent variable (Rubinfeld 2011: 5).

The Analysis of Variance (ANOVA) test will be undertaken in this study to investigate the influence of selected demographic factors on various factors under investigation. An ANOVA test can be described as a statistical test used to establish whether there are significant differences between the means of various data sets. The ANOVA observes the variance of the data set means within the class variance of the data sets themselves (Fred, Filipe & Gamboa 2010:27). For the purpose of this study, when a statistically significant difference will be identified between a factor and a demographic variable, the Bonferroni post-hoc test will be used to detach the difference. The Bonferroni post-hoc test is a statistical test that is used to determine which groups are different in their means (Merkley 2009: 124).

1.7 STRUCTURE OF THE RESEARCH

The research will be structured as follows:

Chapter 1: This chapter constitutes an introduction to the research by presenting a background of the study under investigation. Different definitions of important concepts used are then illustrated. The problem statement, the scope and demarcation of the research, the purpose of the study, and the different research objectives are illustrated. A theoretical model is proposed with several research questions and hypotheses. The secondary and primary studies of the research are then illustrated. This chapter is concluded with a summary of the structure of the study.

Chapter 2: This chapter will start with the definition of the information and communications technologies followed by the importance of the information and communications technologies sector. Due to the gradually growing importance of ICT, ICT professionals are vital for all sectors in every country, therefore the following section will elaborate on employment in the ICT industry. Numerous challenges faced by the ICT industry will then be discussed among which job satisfaction will be identified as a solution to those challenges.

Chapter 3: This chapter will commence by giving a clear definition of the concept of job satisfaction, followed by different theories of job satisfaction. It will be demonstrated that motivation and job satisfaction are closely related and that theories of motivation represent the root of measures and models of job satisfaction. Two approaches will be discussed in more detail concerning the theories of job satisfaction, namely content and process theories. The different factors influencing employees' job satisfaction will then be elaborated on, followed by the nature of job satisfaction in the ICT context. No research was found on the influence of happiness on job satisfaction in the ICT industry; hence this will be the focus of this study as it has been proven that happy employees are more engaged and productive. Therefore, the last part of this chapter will elaborate on the causal relationship between happiness and job satisfaction.

Chapter 4: The aim of this chapter is to identify different factors that can affect an individual's happiness. A conceptualisation of the concept of happiness will be presented in this chapter. After a clear explanation of the concept, the role it plays in society will be elaborated on by stressing the importance it occupies in society. Various factors will be identified as influencing happiness. These factors will be classified into two categories, namely, internal and external factors. Internal factors will include personality factors such as extroversion, neuroticism, self-esteem, optimism, genetics, goals, and adaptation. External factors on the other hand will consist of socio-demographic factors such as age, gender, religion, education, relationships, health and leisure; Economic factors such as wealth, and institutional factors such as organisational culture will also be discussed as part of external factors. Because it is difficult to find items to assess some factors of happiness, the complexity of assessing them and the time constraints, this study will only focus on the influence of organisational culture on happiness as organisation culture is vital for the success of ICT industry.

Chapter 5: This chapter will start by conceptualising organisational culture. In order to understand the concept, different levels of organisational culture will be elaborated on. The importance of organisational culture will then be discussed. Numerous types of organisational culture will be identified in general. After the discussion about the types of organisational culture in general, different types of organisational culture in the ICT context will be elaborated on, with Google as an example of a type of

organisational culture. Various factors that could influence organisational culture will be discussed. Over 250 factors influencing organisational culture will be identified in the literature. However, for the purpose of this study the focus will be on 13 factors that could influence organisational culture, namely, adaptability (Creating change, customer focus, organisational learning), consistency with core values and agreement, strategic direction and intent (vision, mission, goals and objectives), involvement (empowerment, team orientation, capacity development), family orientation, open communication and artefacts and symbols. These factors have been identified as more relevant for ICT employees' organisational culture. Based on a discussion of these factors, a conclusion will be made and a model will be proposed.

Chapter 6: In this chapter, the hypothesised model and hypotheses will be proposed. Sources of secondary data will be discussed. The primary research, which includes an elaborate research paradigm using population, sampling procedure as well as data collection procedure, will be illustrated. The reliability and validity of the measuring instrument will be assessed. The Multiple Regression Analysis will be addressed to establish the relationship between the dependent variables and the explanatory variables. The strength of the relationship that exists between these variables will be demonstrated by the Pearson coefficient of correlation. The Anova test will then be discussed to assess the influence of various demographic variables on the variables under investigation.

Chapter 7: In this chapter, the findings of the empirical investigations will be discussed. This comprises demographic information corresponding to the respondents, results of the validity and reliability of the measuring instrument, descriptive statistics relating to the factors under investigation and correlation between the factors. Results of the Multiple Regression Analysis will also be established as well as the results of the Anova test.

Chapter 8: This chapter will present a summary of the study followed by a summary of each previous chapter and some recommendations will be given. Some limitations of the study and recommendations for future research will be provided to conclude this research. The structure of the study with various research objectives and questions is presented in Figure 1.3 below.

Figure 1.3: Structure of the study

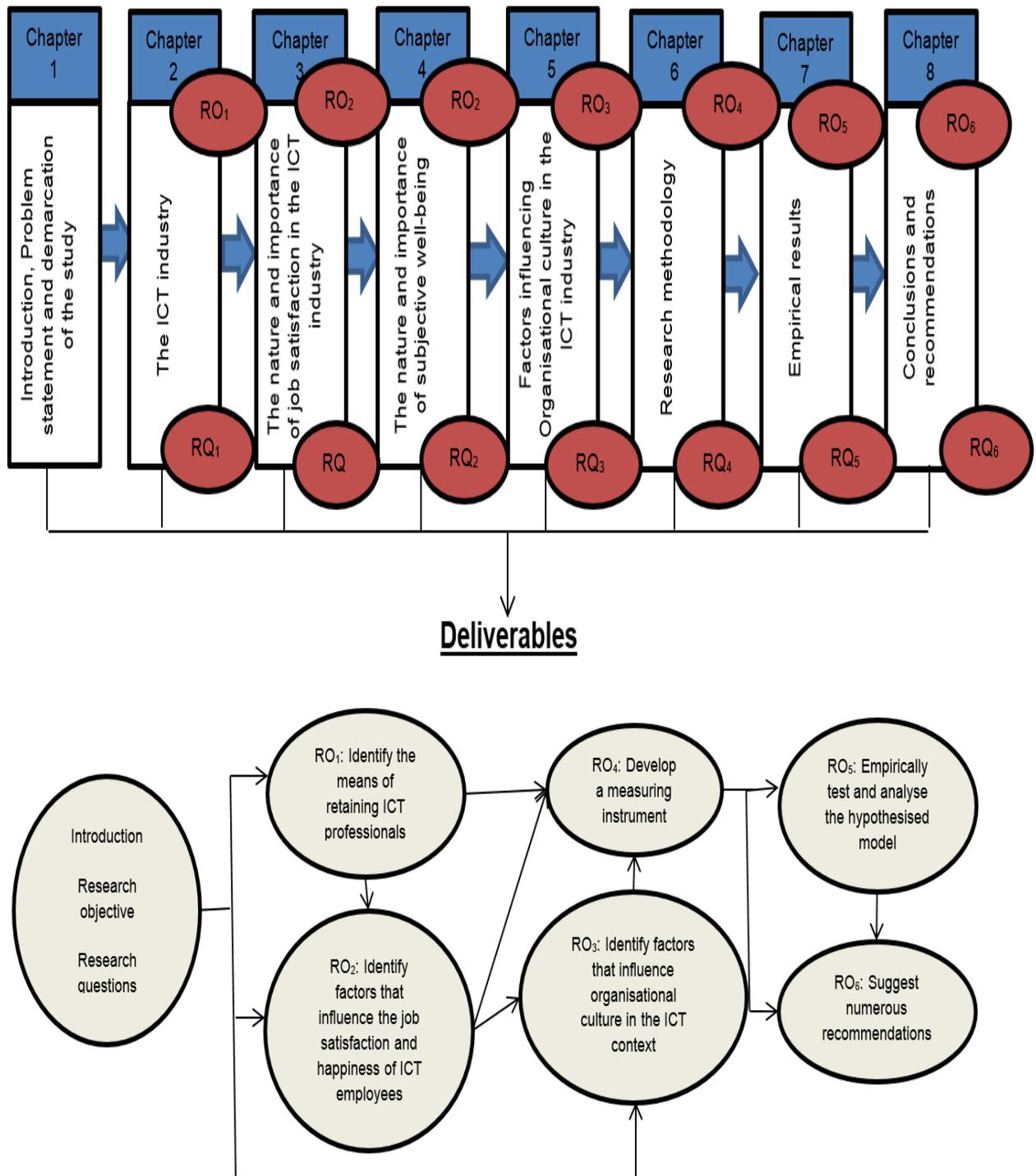
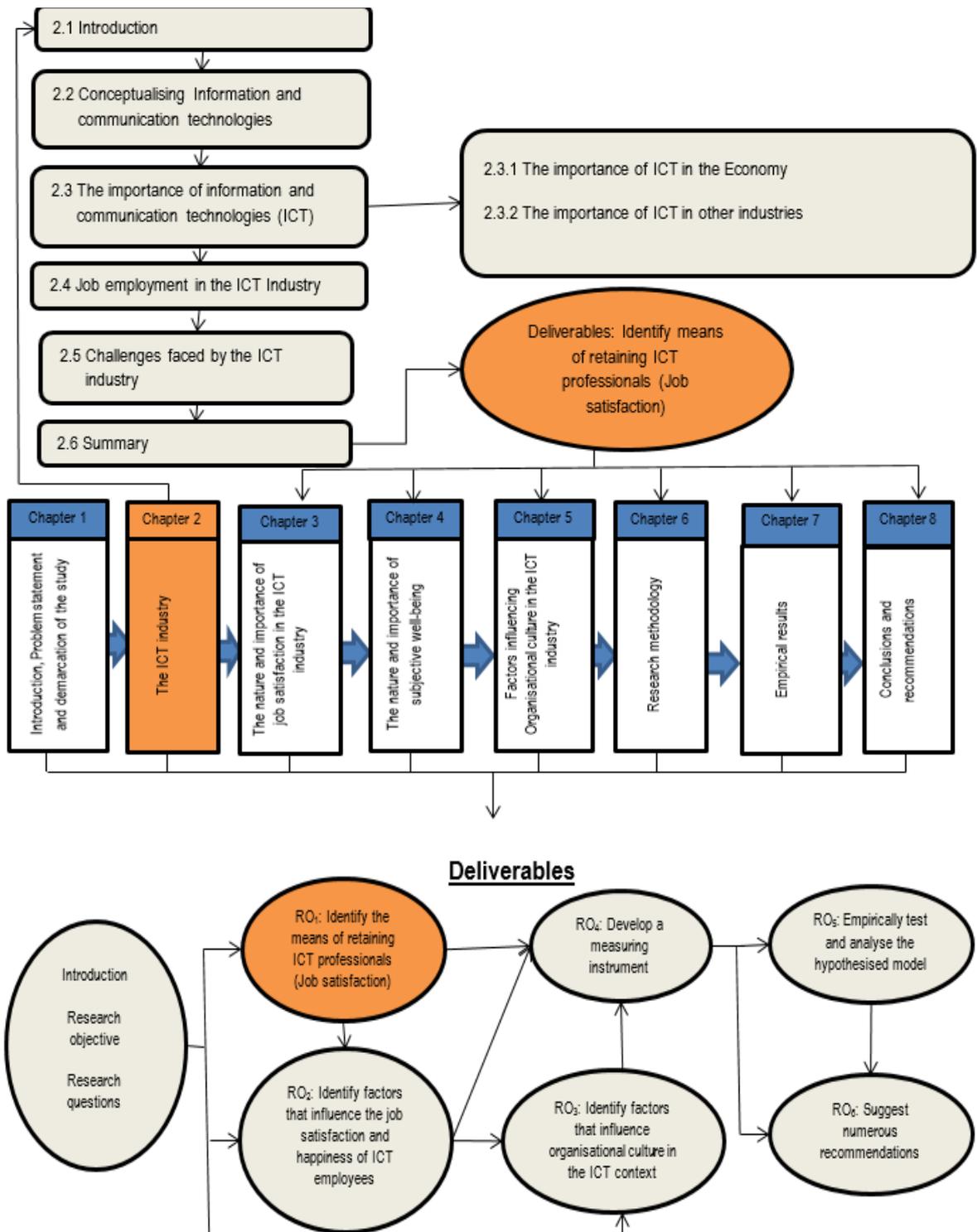


Figure 2.1: Structure and deliverable of chapter 2



CHAPTER 2

THE ICT INDUSTRY

2.1 INTRODUCTION

The utilisation of new technologies has led to ease in connecting economies, the spread of commerce and development of productivity. Activities of small and medium-sized businesses are simplified, costs are reduced and time is saved (Ashtiani & Iranmanesh 2012: 4328). Internationally, on a daily basis, people understand how to bring more regions of the world into the connected space (Cleverley 2009: 30). In recent years, the continued development of Information and Communications Technologies (ICT) and the way it changes people's lives has brought many countries throughout the world to focus more on technology (Ashtiani & Iranmanesh 2012: 4328).

ICT can be described as varied technological resources and tools which are used to communicate, distribute, generate, administer and collect information (Sarkar 2012: 32). Since 2002, the ICT industry has evolved immensely and its effects are gradually transforming societies and economies around the world. Over the past decades, the world has become progressively "hyperconnected". This means that individuals and businesses can communicate with each other instantly, and technologies are equally interconnected with each other. The Internet and its related services are immediate and accessible in today's world (Dutta, Bilbao-Oscorio & Geiger 2012: 3).

Across industry and service sectors, ICT has been recognised as the primary component in enhancing innovation and creativity in value chains. ICT is vital to administer and manage the increase in demand for health and social care, to improve services in fields of public interest such as cultural heritage, education and continual learning, social inclusion, energy, security, environment and transport. ICT is also a vital instrument for encouraging transparency and accessibility of governance and policy development procedures (Tandon 2012: 14).

ICT has been identified as a main driver of employment and a significant support for economic development around the world (Tandon 2012: 42). In South Africa, the ICT industry contributes nearly 6.4% to the country's Gross Domestic Product (GDP) and

is the main ICT industry in Africa. It represents the 20th biggest purchaser of ICT products and services in the world (Swiss Business Hub South Africa 2011: 2). The levels of growth of the electronics industry revenues in South Africa far surpass the overall GDP growth rate (Swiss Business Hub South Africa 2011: 2).

The ICT industry is characterised by high demand for technology professionals. It is therefore vital that employers continue to recruit, retain and retrain experienced employees to support ICT operations. The continuing evolutions witnessed in the technological environment require existing employees to frequently update their technical knowledge (Sanjay 2006: 2). However, technology businesses face several distinctive challenges due to the change and rapid pace of innovation in the ICT industry. Among these challenges, there is the retention of skilled employees and the conservation of the business's most valuable assets (Kachmar 2012: 2).

The aim of this chapter is to highlight the importance of the ICT industry in the world in general and in South Africa in particular, and to consider how the crucial problem of the retention of ICT professionals can be addressed by ensuring employees' job satisfaction in the ICT industry. Hence, this chapter is addressing the first research question and the first research objective.

This chapter will commence by conceptualising information and communications technologies (Section 2.2). This will be done by means of numerous definitions of the concepts of ICT. The importance of information and communications technologies will then be discussed (Section 2.3). It will be shown that ICT influences numerous sectors of economies around the world (Sub-section 2.3.1). The importance of ICT will then be highlighted in other industries (Sub-section 2.3.2), namely manufacturing, education, healthcare, banking, tourism and agriculture sectors. Due to the gradually growing importance of ICT, ICT professionals are vital for all sectors in every country, therefore the following section will elaborate on employment in the ICT industry (Section 2.4). The last section of this chapter will deal with the challenges faced by the ICT industry. Several challenges have been identified among which the most critical appears to be retention of employees (Section 2.5). A summary of the chapter will then be made (Section 2.6).

2.2 CONCEPTUALISING INFORMATION AND COMMUNICATIONS TECHNOLOGIES

Information and communications technologies (ICT) is defined as the diverse pool of technological resources and equipment which is used to communicate, distribute, generate, administer and collect information (Sarkar 2012: 32). According to The *South African Information Technology Industry Strategy (SAITIS)*, the South African ICT sector is constituted of major industries such as manufacturing, which include computer hardware and telecommunication equipment; services, which encompass IT professional services (comprised of custom software application development and maintenance); computer software (packaged software products, cross industry and vertical market applications); and telecommunication services (Breitenbach *et al.* 2005: 4).

The inter-American Development Bank defined ICT as the use of both traditional and modern communications and computing technologies to create, use and manage information (Tandon 2012: 15). This definition includes equipment and services that ease the electronic capture, display, processing and transmission of information, and comprise the Internet, the computing industry, electronic and display telecommunications and related services and associated audio-visual equipment (Tandon 2012: 15).

Sawant, Tandale and Kulkarni (2012: 176) defined ICT as the mechanisation of procedures, controls, and information production utilising computers, software, telecommunications and auxiliary tools such as automated teller machines and debit cards. ICT further incorporates software, hardware, network, as well as the users who utilise and interact with the system. In this sense, the use of technology as well as strategic and organisational aspects of the presentation and utilisation of information systems is reflected (Schubert & Leimstoll 2007: 39). Asabere and Enguah (2012: 62) described ICT as the facilities, tools, procedures and equipment that deliver the required environment with physical structure and services for the creation, processing, transmission, storing, and spreading information in all forms comprising voice, data, text, video and graphics.

According to the Global Alliance for ICT and Development (2009: 4), ICT is defined as implements that ease communication and the transmission and processing of

information and distribution of knowledge by electronics means. This involves the full collection of electronic digital and analogue ICT, from television and radio to telephones, computers, electronic based media such as audio-video recording, digital text and the Internet, comprising Web 2.0 and 3.0, web-based communities and social networking.

ICT is an extensive name that is usually used synonymously with many other concepts such as Information Technology (IT), Computer Science (CS), information systems (IS), informatics and computing and Information Technology. This confusion of terminology arises due to the corresponding nature of fields within the discipline (Mclachlan, Craig & Coldwell 2010: 127).

ICT can also be separated into two constituents, namely, Information and Communication Infrastructure (ICI), which firstly is the physical telecommunications systems and networks (broadcast, cable, cellular, postal, satellite) and the services that use those (voice, mail, Internet, radio, and television). Secondly Information Technology (IT), that represents the software and hardware of information collection, processing, storage, and presentation (Sarkar 2012: 32). ICT is therefore an umbrella term that comprises any communication facility or application, including television, radio, mobile phones, computer and network, hardware and software, satellite systems and so on, as well as the different services and applications linked with them, such as distance learning and videoconferencing (Amoako 2012: 2).

IT and ICT will be referred to as ICT for the purpose of this study. ICT will therefore be defined as diverse cluster of technological tools and resources which are used to generate, distribute, communicate, administer and collect information (Sarkar 2012: 32). As the definition of ICT is clear, it is necessary to understand its importance in today's world.

2.3 THE IMPORTANCE OF INFORMATION AND COMMUNICATIONS TECHNOLOGIES (ICT)

ICT is an enabler that has influenced and changed the way people live (Sarkar 2012: 32). Access to worldwide service and access to ICT is a crucial national aim in numerous countries, often protected by regulations that administer the sector (Sarkar 2012: 31). The influence of ICT in various aspects of work and life is growing. In this

context, the way people measure, monitor and benchmark the distribution and influences of ICT must advance to keep pace with the fast changes and consequences of living in a hyperconnected world (Dutta *et al.* 2012: 4).

The ICT industry has evolved rapidly over the past decade. New mechanisms of evaluating ICT and integrating it in multiple devices, more powerful technologies and new ways of creating digital content have advanced, completely changing the industry and hastening the conjunction between telecommunications, ICT and the media industries (Dutta *et al.* 2012: 5).

Since 2006, the importance of ICT has been amplified more than any other industry, showing that consumers consider the industry more as social provider. The financial crisis of 2008 placed even more pressure on all sectors including ICT (Beardsley, Enriquez, Bonini, Sandoval, & Brun, 2010: 62). This importance highlights the fact that no other industry in the world can reach out to 6 billion mobile phone owners almost instantaneously, or that 2.3 billion people worldwide were connected to the Internet at the end of 2011 (McQueeney 2012).

ICT realises its massive economic influence by reaching the economy via two channels: firstly through the ICT industry itself, and secondly through other sectors that are influenced by ICT advances (Ezell & Andes 2010: 1). Countries have understood that ICT can provide social benefits, so they have launched extensive programmes to advance the level of government service, education and health which they offer to their populations (Beardsley *et al.* 2010: 62). Firstly, the importance of ICT in the economy will be discussed in the following paragraph, and secondly its importance in other sectors.

2.3.1 THE IMPORTANCE OF ICT IN THE ECONOMY

The ICT industry, comprising telecommunications operators, electronic equipment manufacturers, computers and software developers, is gradually playing a significant role in the worldwide economy (Beardsley *et al.* 2010: 61). ICT's role in allowing economic development has become more vital as governments are investing in methods to stop the effects of the global financial crisis. As U.S. President Barack Obama stated in January 2009, "Increased broadband spending, electronic medical records, green energy investments, and new computers for schools and libraries are

all smart ways to keep America competitive while also creating new jobs and spending” (Beardsley *et al.* 2010: 61).

The ICT industry development in goods and services has increased progressively before the global economic and finance crash of 2008. Since 1996, it has tripled to approach US \$4 trillion in 2008. Despite the 2008 crash-induced fall, the long run forecasts for additional growth in the ICT sector stay solid, as ICT becomes increasingly indispensable for social and economic infrastructure for all economies (Tandon 2012: 13).

The direct contribution of ICT to economic growth can be observed by the fact that since 1980, fundamental research into ICT has generated around 20 entirely new ICT-related product categories that have transformed into multibillion dollar companies. These comprise Open Source Software (OSS), the Internet, Graphical User Interface (GUI), client-server computing, the world wide web to name a few (Ezell & Andes 2010: 1). The growth of ICT industry in the economy has become progressively significant and now accounts for a vital portion of employment and value added. Moreover, ICT cooperates closely with numerous other sectors, hence allowing innovation to increase and touch the overall productivity of a country (Dutta *et al.* 2012: 5).

New ICT-based or enabled business practices are rapidly transforming economic structures and the ways economic activities are organised, generating sharp productivity improvements (Dutta *et al.* 2012: 5). The Internet will continue over the coming decades to be one of the major drivers of universal economic growth (Tandon 2012: 25). In fact, it demonstrated that more than 75% of the added value generated by the Internet is in traditional industries that do not describe themselves as genuine Internet actors. The major influence of ICT is the transformation of these traditional activities (Tandon 2012: 25).

ICT has further changed society and the ways people cooperate with each other and with governments. New methods of commitment between populations and governments have appeared, not only in terms of redefining governance instruments and social engagement but also in the shape of new ways of distributing public services (Dutta *et al.* 2012: 5). The intensifying use of ICT has changed the way businesses operate worldwide. Corporate business models have been applied to

more optimal value and supply chains, and the work patterns of individuals have been redesigned. The public sector is also making greater use of ICT. For example, within the last five years, more than five hundred e-government initiatives have been launched around the world which represents an exponential growth in comparison to only three that were launched in 1996 (Jordan National Competitiveness Team 2007: 93).

Non-governmental organisations and governments worldwide have acknowledged the benefits of ICT in improving public service and business, encouraging governmental developments, and reducing poverty. ICT will contribute to help spread valuable information on conservation and production, improvements in the provision of basic social services, the efficiency of governments and increase the delivery of education and health (Almatarneh 2011: 151).

ICT generated around 5% of total GDP growth between 2003 and 2008 and it signified 5.4% of world's GDP in 2008. This amount is projected to reach 8.7% by 2020 (Beardsley *et al.* 2010: 61). Countries which account for more than 70% of worldwide GDP, comprising G8 countries, the large high-growth economies of Brazil, China and India and the Republic of Korea and Sweden have demonstrated that the growth of their economy and creation of jobs on a large scale relied on ICT (Tandon 2012: 25).

2.3.1.1 The importance of ICT in different countries

Increasing recognition of the significance of the ICT industry on its own and its function as a driver of economic development as a whole is noticeable. In 2009, the ICT industry contributed about US \$1 trillion to the U.S. GDP, hence representing 7.1% of the country's GDP. About 3 535 000 jobs were created by the ICT industry in the same year. The compensation of full-time ICT employees was 6% higher than the average compensation of all full-time workers in the U.S. From 1991 to 2009, there was an increase of 162% in average reward in the ICT industry; these are the fastest income gains of any U.S. industry (Shapiro 2011).

In 1999, Majesty King Abdullah II of Jordan acknowledged the ICT sector as a major promoter of the country's economic growth after the sector had been observing fast changes. The sector's total revenue has grown from little over US \$170 million in

2001 to above US \$750 million in 2006. The export revenue rose from US \$40 million to US \$191 million during the same period. In 2007, the ICT sector contributed approximately 5% of Jordan's GDP and the number of employees in the sector has surged from little over 6,000 to over 10,000 (Jordan National competitiveness Team 2007: 91). Numerous factors, such as the availability of world-class infrastructure, highly qualified human resources, and the success of Jordanian ICT companies contribute to the development of Jordan's ICT sector and assist in the alteration of Jordan into a main regional ICT hub. Attractive opportunities for foreign investors are provided by the development of this sector, locally and regionally (Almatarneh 2011: 152).

A study conducted in Britain demonstrated that, as the rate of growth of investment in ICT increased, it became a main catalyst for the economic growth and a direct supplier to growth in labour productivity (Dolton & Makepeace 2004: 117-129). In the Cambridge sub-region of the UK, studies also demonstrated that there is a positive relationship between the existence of a group of information and communications technologies-based firms in the sub-region and the area's fastest growth rate and the lowest unemployment rate in the eastern region (Jonas & Gibbs 2003: 1018-1037).

In Massachusetts in the US, the ICT industry is commonly known as the driving force behind its economic innovation. In 2008, the ICT industry directly spent US \$65 billion in Massachusetts, a number that is equivalent in scale to approximately 18% of state GDP. Moreover, 5.5% of Massachusetts workers are employed by the Massachusetts ICT industry (Executive report 2009: 4).

The Indian ICT industry is playing a crucial role in India's economic growth. It contributes approximately 5.2% of the country's GDP. This sector offers employment to more than 2.5 million individuals either directly or indirectly, hence making it one of the largest job creators in India (Wadhwa & Koul 2012: 1).

In South Africa, the ICT sector has continued to attract the attention of the government through its enormous potential to contribute to economic growth and development. In promoting the development of the ICT sector in South Africa, the government has engaged in various initiatives to motivate the development of the sector in collaboration with other stakeholders. The SAITIS project is recognised as one of the earliest initiatives which attempts to set out an ICT sector strategy

development framework for South Africa. The SAITIS project, which was introduced in 1995, has as its key objective, bridging the universal development gap and the development of a robust, growing and maintainable ICT sector that would support and subsidise sustainable economic growth, social development and empowerment (Breitenbach *et al.* 2005: 4).

The South African ICT market contributes nearly 6.4% to the country's GDP and is the biggest ICT industry in Africa. It is the 20th largest consumer of ICT services and products in the world. The levels of development of the electronics industry revenues in South Africa far surpass the overall GDP growth rate (Swiss Business Hub South Africa 2011: 2). South Africa is also recognised as a quality, low-cost call centre destination. South Africa is host to call centres for Samsung's European digital camera division, UK retailer Asda, AOL, Virgin Mobile UK and others (Swiss Business Hub South Africa 2011: 2). Communication in South Africa has been opened up by new legislation, such as the Telecommunication Amendment Act of 2011, which encouraged international telecoms operators such as Virgin Mobile to introduce their products into the country (Swiss Business Hub South Africa 2011: 2).

The ICT sector has a prominent role to play in the promising economic development and participate in other programmes to benefit society such as developing healthcare access and service as well as access to education (Beardsley *et al.* 2010: 61). Beyond the economic advantages, the ICT sector is exclusively situated to help shape a more socially sustainable future. It has been revealed that the ICT industry is recognised to be among the top four industries in terms of its potential participation in benefitting society behind healthcare, agriculture and utilities (Beardsley *et al.* 2010: 61).

Besides inspiring economic growth, the ICT sector is assisting to realise social sustainability by developing the way governments and societies deliver education, healthcare and services to populations (Beardsley *et al.* 2010: 65). Definite repetitive tasks across almost all existing sectors are unavoidably influenced by the ubiquity of ICT (European Commission 2012: 3).

2.3.2 THE IMPORTANCE OF ICT IN OTHER INDUSTRIES

ICT, because of its fast development in costs and performance and its ability to capture, display, process, store and communicate information provides many opportunities (Bjorkdahl 2011: 335). ICT brings a vital change in every aspect of our lives. It affects social interaction, knowledge distribution, economic and business practices, media, political engagement, education, health, leisure and entertainment (Nayak, Thorat, Kalyankar 2010: 220). Because it complements other technologies, ICT has an important impact on the majority of industries (Bjorkdahl 2011: 335).

2.3.2.1 The importance of ICT in the manufacturing industry

The last one and half decades are marked by the evolution of ICT and its increasing effect on the business world. ICT has modified the buying and selling habits of consumers, business operations, the market place and advertising channels (Tewari & Misra 2012: 924). The participation of ICT in the manufacturing sector has become vital over the recent years and ICT is increasingly involved in developing efficient business processes and is linked with future manufacturing processes by delivering gains in efficiency through automation and the integration of different processes along the whole value chain (Majumdar 2011: 3).

James, Esselaar and Miller (n.d.: 11) argue that the 20th century witnessed the use of innovative manufacturing processes such as production line automation and “just in time” manufacturing. Dramatic changes occurred in the ICT industry itself, with more memory packed onto circuitry or chips. These developments also allowed manufacturers to change the patterns of their competitive environment.

ICT can be used from the first step of acquisition of materials to the last step of selling the final products. In a global environment, ICT can provide competitive advantages to the traditional manufacturing industry through its ability to incorporate and mix numerous knowledge- intensive technologies. Advanced use of ICT can lead to new sales channels, product differentiation and new product competences. ICT can also help to increase productivity, reduce costs and develop a base for strategic decision-making and risk management (Omae & Ateya 2011: 1). Furthermore, the application of ICT in management has been proven to improve

resource capabilities, expand market knowledge, improve strategy selection and advance persuasive communication (Tewari & Misra 2012: 924).

Tewari and Misra (2012: 924) argue that ICT can reduce production and labour costs, add value to products and services and heighten the company's operational and marketing performance. It offers many automated tools in addition to hardware and software which help the business in decision-making as well as in executing their operations. It lowers error rate and processing time and increases the effectiveness and efficiency of operations (Tewari & Misra 2012: 924).

ICT is incorporated into established goods by manufacturing businesses, e.g. computers, software, sensors and real-time systems are being integrated into current manufacturing products. Combining ICT with manufacturing goods, the fast and persistent development in performance and cost of ICT delivers numerous opportunities for better performance and new functionality (Bjorkdahl 2011: 336). This incorporation of ICT by businesses into existing products is generating new ways of control and monitoring in the applications or goods. Therefore, existing manufacturing products are likely to become "smart" (Bjorkdahl 2011: 336). The mixing and recombination of old and new technologies is creating new ways of generating value. It generates value for customers and delivers new ways for businesses to mature and thus can be claimed to be one of the drivers of innovation processes in business (Bjorkdahl 2011: 337).

Mbendi (2013) argues that six major industry sectors play vital roles in the development of South Africa's manufacturing sector, namely, Agriculture and Agriprocessing, Chemicals, Automotive, Mining and Metallurgy, Textiles and Clothing production and Information and Communications Technology and Electronics. The Gauteng ICT sector for example contributes more than 6% to the regional GDP. The sector comprises a varied range of software design and hardware manufacturing, and diverse service offerings such as systems programming, software management and technical support (Gauteng companies 2007).

2.3.2.2 The importance of ICT in education

Since the late 1990s, a significant discussion has been initiated by the introduction of ICT as an instrument to support the education sector. A decade ago, the focus was

on vocational and technical education and training teachers. During the last few years, the potential of ICT to support the education sector has been adopted by a growing number of international development agencies (Sarkar 2012: 32). Since the introduction of computers, there have been plans and ideas of using the computer as a learning instrument. E-learning is recognised to be the result of these plans (Asabere & Enguah 2012: 62).

E-learning describes the delivery of quality and flexible education through the use of ICT to extend admittance to education to those who cannot attend lectures on campus (Asabere & Enguah 2012: 62). Standards, improvements, specifications and subsequent adoptions have led to major development in the extensibility, scalability and interoperability of e-learning technologies. E-learning has been rapidly acknowledged as a major means of learning (Sarkar 2012: 31).

The ICT sector has already radically modified the way people access educational material and study. A large variety of information is freely accessible from the Internet, something that was not so available 20 years ago (Beardsley *et al.* 2010: 65). The use of websites, email, virtual libraries and classrooms has flourished, simplifying the distribution of information on a wide scale (Beardsley *et al.* 2010: 65).

In Rwanda, the political leadership has revealed that ICT is a major development priority, and the country has started numerous plans with the support of multilateral development agencies to connect schools and universities to the internet and to provide computers and laptops to students. These efforts are intended to bring more students online (Tandon 2012: 43).

The use of technology within teaching and learning in Higher Education (HE) has been growing in the United Kingdom over the last decade. Particularly since 1993, the creation of technology-based materials has been promoted by the Teaching and Learning Programme (TLTP) for use across the HE sector. One of the impressive advantages of ICT in teaching is that ICT can improve the quantity and quality of the provision of education (Sarkar 2012: 36).

In South Africa, since 1996 the education policy agenda has been growing with the existing ICT and it is implanted within a broader national government economic, social and development strategy which comprises attention at the top level of

government to the role of ICT in job creation, promotion of economic growth, global competitiveness and social improvement. South Africa's strategy is also associated with a bigger pan-African mandate as stated in the commitment to New Partnership for Africa's Development (NEPAD); renovation in education and advance in skills at all levels, and a devoted strategy for the conversion of teaching and learning through the use of ICT (Shafika 2007: 5).

2.3.2.3 The importance of ICT in the health sector

The health care sector has traditionally been based on paper-based medical archives, and manual procedures that make it problematic to collect, reclaim, and share information among doctors, with insurance companies and patients. Nevertheless, in the last few years, the sector has started to invest in new health ICT devices that capture and share numerical results, and transform the administrative systems (Tandon 2012: 28).

The exploitation of ICT for health (e-health) has the ability to renovate healthcare by competently connecting people and by advancing information sharing. Recently, e-health has been largely observed in developed countries. However, as the accessibility of ICT expands quickly in developing countries, there is a prospect of developing healthcare access to regions where poverty, scarce resources and distance are presently barriers to even elementary care (Beardsley *et al.* 2010: 65).

E-health can be described as the involvement of all Information and Communications Technologies, instruments and services in healthcare that connect or interface patients and providers of health services. This includes doctors and health specialists and those in charge of the diffusion of data related to health between institutions (Botha 2010: 1). E-health includes e-referrals, health information networks, e-prescriptions, electronic health records, wearable and portable devices, telemedicine services, health portals used as informational frames for research and medical care and many other ICT based tools that support disease prevention, health monitoring, diagnosis, treatment of disease and lifestyle management (Botha 2010: 1).

The use of e-health technologies allows patients, doctors and pharmacists to synchronise their efforts in the best interests of everyone. No individual can

remember all the diseases suffered, all the medicines taken and all the allergies contracted, especially in an emergency. Computerised medical records now deliver all the required information to doctors before they start to treat a new patient (Botha: 2010: 5).

A current and accurate e-health status for each country in Africa is difficult to provide as there is no single source of e-health in Africa (Botha 2010: 9). Botha (2010) analysed the status of e-health in the sub-Saharan Africa (including South Africa) and revealed that there are random e-health projects that have been created in the sub-Saharan region, unfortunately there is little or no information about their consequent evolution. Nevertheless, the author reveals that with the rapid growth of ICT, sub-Saharan countries were left with no option but to gradually start to adopt ICT in the health sector (Botha 2010: 10).

2.3.2.4 The importance of ICT in the banking sector

In the banking industry, computers have been used since the International Business Machine (IBM) computers were launched in 1980s. However their influence was restricted due to their limited number (Amoako 2012: 4). A complete model shift on the customer service delivery and on the bank's performance in the banking industry has been brought by ICT. In order to develop the quality of customer service distribution, and decrease transaction costs, banks have invested deeply in ICT, and have extensively embraced ICT networks for distributing an extensive range of value-added products and services (Aliyu & Tasmin 2012: 80).

E-banking has been recognised as radical progress in the banking industry (Sawant *et al.* 2012: 176). E-banking is a term that describes the distribution of banking services and products through ICT such as the Internet, telephone, and cell phone (Sawant *et al.* 2012: 176). E-banking describes the situation where any user with a private computer and access to the Internet can be connected to his bank's website to operate any virtual banking functions (Sawant *et al.* 2012: 176).

Amazing development in banking techniques throughout the world is based on the modernisation of the ICT industry (Aliyu & Tasmin 2012: 81). An explosion of the Internet-based electronic banking application has been noticed during recent years

(Sawant *et al.* 2012: 177). The improvement of worldwide networks for example has significantly reduced the cost of global funds transfer (Aliyu & Tasmin 2012: 81).

Numerous ICT systems have had great influence on banking activities such as Banker's Automated Clearing Services (BACS), Automated Teller Machine (ATM), Telephone Banking, personal computer banking, Electronic Funds Transfer at Point of Sale (EFTPoS) and internet banking (Amoako 2012: 5). According to Sawant *et al.* (2012: 176), three major ways describe the use of ICT in the banking industry, namely, effective ATM, processing cheques and home banking. Home banking provides the customer access to bank accounts 24 hours a day via the Internet or mobile phone.

ICT improvements have allowed distributed information to be assembled into accessible composite organisational database knowledge sources. Self-service facilities such as computerised client service machines have been made available by technology. These facilities have allowed the online completion of documents concerning a potential customer's account opening, the validation of account numbers and reception of tutoring on when and how to collect credit, debits cards, and chequebooks. Text messages are sent to a mobile phone (Sawant *et al.* 2012: 176).

South Africa's ICT industry is recognised by its leadership in technology, especially in the field of banking services. South African firms are world leaders in revenue management and fraud prevention systems, pre-payment and in the production of set-top boxes, all exported effectively to the rest of the world (Swiss Business Hub South Africa 2011: 5).

2.3.2.5 The importance of ICT in the tourism industry

ICT has transformed the tourism industry since the early 1990s (Berne, Garcia-Gonzalez & Mugica 2012: 205-214). ICT has participated in the massive development of tourism and the amplified volume of supply and demand. ICT has been transforming the way tourism companies operate. E-tourism therefore can be described as the application of ICT to the tourism industry (Stiakakis & Georgiadis 2009: 2). An e-tourism initiative was launched in June 2004 by the United Nations Conference on Trade and Development (UNCTAD), which aims at improving

developing countries' ability to share information about their tourism offer, and match it to the global demand. It comprises locally created information about the offers in tourism which the country makes and gives information about online services such as hotel reservations (Wangwe 2007: 24).

Travel agencies, tour operators, car rental companies, hotel enterprises, cruise companies and so on can benefit from the advantages of ICT since these technologies provide many functional activities such as marketing, sales, operation, human resource management and purchasing (Stiakakis & Georgiadis 2009: 2).

Tourist products and destinations are better marketed via the Internet rather than by traditional methods such as brochures and advertising catalogues. ICT allows direct collaborative relationships between the customers and tourism organisations. The most interesting viewpoint of ICT application on marketing in the tourism industry is that, the organisation can create a customer's profile and make personalised offerings. ICT allows sales to be successfully completed without the need of mediators. For example, customers can now book and buy their tickets online without the intervention of a travel agent. Numerous systems based on ICT such as management information systems, customer relationship management, enterprise resource planning, can improve and ease information flow in the tourism environment (Stiakakis & Georgiadis 2009: 2).

Furthermore, in recent years, mobile devices such as conventional mobile phones, PDA, smartphones, tablet PC, palm tops as well as devices fitted in vehicles are increasing their importance especially for consumers who seek specialised, flexible and easily accessible products (Okazaki, Campo & Andreu 2012: 339). Due to the fast propagation of smartphones worldwide, a varied range of tourist applications have been introduced in combination with mobile technology (Okazaki *et al.* 2012: 344).

In the United States, the utilisation of recent information and communication technologies, in tourism is acknowledging growing interest from organisations. Recent ICT, especially social media and mobile technologies have brought in potential new sources of competitive advantage for tourism (Maumbe 2012: 2).

The increasing use of internet is allowing Africa to use the potential of the tourism industry in terms of marketing, tourism promotion and sales (Wangwe 2007: 24). Countries with high tourism potential such as Egypt, Kenya, and South Africa can benefit from the model in developing and promoting tourism and using the potential of ICT for better organisation, promotion, management, and cost reduction. For example, e-tourism allows the provision of an official guide of the country's hotels with information on hotel rooms with facilities for online reservation (Wangwe 2007: 24).

2.3.2.6 The importance of ICT in the agriculture industry

In the agriculture sector, ICT can provide to farmers valuable information such as animal husbandry and crop care, feedstock contributions and fertilizer, pest regulation, seed sourcing and market prices (Nayak *et al.* 2010: 220). Remote sensing data can be used to deliver maps to show areas with potential soil erosion hazards, hence enabling decision-makers to make the required intervention to improve the situation (Wangwe 2007: 23).

The developing new technologies can transform the way production is planned in agricultural and rural development in Africa. ICT provides new ways of mass distribution and exchange in pest control, farming techniques, and agri-exports. ICT allows farmers in the rural areas to share information, access knowledge, and gain farming skills to develop their crop production, and so generate a culture of sharing of information and experience within the African communities (Wangwe 2007: 23).

Based on the previous discussion, the following list of important criteria of ICT can be given:

- ICT is increasingly playing a vital role in the development of economy worldwide;
- ICT becomes increasingly indispensable for social and economic infrastructure for all economies;
- ICT participates in a vital portion of employment and value-added for all economies;
- ICT has changed society and the ways people cooperate with each other and with governments; and

- ICT brings a vital change in every aspect of our lives, including social interaction, knowledge distribution, economic and business practices, media, political engagement, health, leisure and entertainment.

ICT is gradually being seen as a significant infrastructure for all sectors of the economy. Consequently, encouraging ICT skills and employment is a progressively imperative goal of policymakers looking to connect the economic and the social potential of these technologies (OECD 2012: 5). The key for the building of an energetic and diversified ICT sector has been proven to be human talent with the right skill sets. The skilled pool will have to be developed by the building and training of equal, gender-neutral human capital principally in universities, research and development centres as well as in schools in response to the evolving ICT industry (Tandon 2012: 14). Therefore the aim of this study is to focus on ICT employees that appear to be a vital piece in every organisation and society in the world.

2.4 JOB EMPLOYMENT IN THE ICT INDUSTRY

The success of ICT relies not on technology per se, but on the aptitude and ability to manage it (Amoako 2012: 3). A bright future is predicted for ICT professionals (Tandon 2012: 13). An urgent need for an extensive range of ICT talent describes the ICT sector. A scarcity of skilled employees is foreseen in technical fields in many countries and regions (Tandon 2012: 13).

The supply of professional ICT personnel is vital in terms of meeting present business ICT demand and motivating future demand, supporting new business development and internal investment (Expert Group on Future Skills Needs 2012: 5). As a consequence of ICT spreading throughout the economy, a significant increase has been noticed in ICT employment. This comprises employment directly in the ICT sector but also indirectly in terms of ICT professionals in non-ICT sectors (e.g. health) as well as among ICT-intensive customers in all sectors which depend on ICT skills to execute their jobs (OECD 2012: 5).

Contrary to other categories of work, during the economic crisis of 2008, employment of ICT experts actually increased at about 3% per year. Consequently, by the end of 2010, the ICT industry employed 4.1 million Europeans in the narrowest definition (computer assistant staff and programmers), representing an

increase by 2.7 million from ten years earlier. It is vital not to confuse the work of ICT professionals with the ICT industry, 55% of professionals work in other industries rather than in the ICT industry itself (European Commission 2012: 4).

Basic computer related skill is a prerequisite in most professions nowadays. In EU, Advanced ICT users account for 18.5% of employment, fluctuating from 9% to 31% according to the region, whereas ICT specialists account for only 3.2 % of employed individuals. The forecast is that by 2015, 90% of professions in Europe will require basic computer skills (European Commission 2012: 6).

The employment of ICT professionals is increasing so rapidly that the number of vacancies available in the sector far surpasses the number of professionals. A recent survey revealed that there will be up to 700 000 unfilled ICT professionals' vacancies in the EU by 2015 (Tandon 2012: 13). The same tendency is verified for the United States and for developing countries such as India and China (European Commission 2012: 4; Tandon 2012: 13).

According to Halligan, Chairperson of the Expert Group on Future Skills Needs, in Ireland, the accessibility of ICT professionals for the ICT sector and other sectors such as banking and business services and international financial services is of crucial economic importance for sustained evolution in investments from inflows of new Irish-owned start-ups and growth of existing businesses and new foreign companies. This is causing amplified sales, exports and high quality jobs. The ICT sector itself currently hires 75 000 people in 8 000 businesses in Ireland (Expert Group on Future Skills Needs 2012: 1).

Characterised by a developing labour market, the ICT labour force in Canada reached 700 000 for the first time in September 2010. Numerous employees joined or returned to the work force, pushing the ICT work force up to 702 000 in March 2012. Of these employees, 682 000 were newly employed suggesting an 11% year-over-year employment growth since March 2011 (Information and Communication Technology Council 2012: 2).

Between February 2012 and March 2012, an overall number of 8 500 ICT jobs was created in Canada. An important number of these jobs was generated for Interactive Media Developers (+4 500), Information Systems Business Analysts (+5 600) and

Computer and Information System Managers (+2 300) (Information and Communication Technology Council 2012: 2).

According to the Brazilian Agency for Promotion and Export of Software (Softex), the Brazilian ICT sector presently hires 600 000 individuals. There was a deficiency of about 75 000 professionally qualified employees in 2010 and the prediction is this number will increase to 92 000 in 2011 and to 200 000 by 2013 (Tandon 2012: 13).

In South Africa, the country's Department of Home Affairs supplied a list of unoccupied technical jobs in 2011. This list revealed a shortage of approximately 3 000 software and application programmers, 1600 information and communications technology support technicians and nearly 3 000 project and other managers (Fripp 2012).

Realistically, the operation of an organisation without the use of one or more ICT services has become practically impossible. Since its beginning, ICT represents for many people the cure-all for different organisational ills and also a remedy for poor performance and efficiency by means of the magic of automation. However, despite the fact that ICTs can provide numerous solutions and assistance, they also present an organisation with their own specific problems and challenges (Beaumaster 1999: 6).

2.5 CHALLENGES FACED BY THE ICT INDUSTRY

In the mid-to-late 1990s, some researchers were concerned about the perceived scarcities of ICT professionals, i.e. professional engineers, software developers, systems analysts, and programmers who are in charge of the well-being of the ICT industry's computer systems within non-ICT businesses (Handel 2003: 7).

A range of recruitment challenges has appeared for high level ICT professionals both from businesses within the sector and from companies across the economy. These ICT professionals have been shown to be in short supply globally (Expert Group on Future Skills Needs 2012: 1). Demands for skills are emerging in service design, cloud computing, social networks and media, database management, Internet marketing and development of e-commerce applications (Expert Group on Future Skills Needs 2012: 8).

The ICT occupation is at the crossroads. A considerable number of the current ICT labour force is expected to retire within the next decade (Shropshire & Kadlec 2012: 6). This is not surprising based on the fact that the baby boom generation currently provides as much as a quarter of the current workforce. At the same time less individuals are entering the ICT sector (Shropshire & Kadlec 2012: 6). The consequences of such a labour scarcity will be complex and far-reaching. Companies will be required to spend more to employ replacements. The present work force will have to work harder and longer to make up the anticipated scarcity. As an outcome of these situations, all parties will be dissatisfied (Shropshire & Kadlec 2012: 6).

The number of youth employees aged 25 years or less in the ICT work force of Canada was 33 000 in March 2012, growing slightly by 1 600 employees (5%) since February 2012, but dropping significantly by 7 400 (18%) since March 2011. On the other hand, ICT employees aged 55 and above, stayed unchanged since February 2012 and is characterised by a 20% year-over-year growth (Information and Communication Technology Council 2012: 7).

Considering that the market researcher International Data Corporation (IDC) forecasts that ICT expenditure in sub-Saharan Africa will increase by 9.9% in 2011 (year-on-year growth from 2010), to surpass the US \$23 billion, there will be a critical shortage of ICT skilled workers in the near future (Fripp 2012). South Africa has a fairly well developed ICT infrastructure in different areas and population hubs, however it lacks of highly skilled ICT professionals. At the lower end of the ICT skills range, a more demographically illustrative labour force appears to be emerging, but the challenge in South Africa is to acquire accurate and timely data to stimulate policy decisions about the structure of a vigorous and broadly-based ICT sector. The demand for ICT professionals will revolutionise planning, the creation of ICT infrastructure and the requisite supporting regulations (Tandon 2012: 42).

Several ICT companies and recruitment organisations in South Africa complain about a breach in the market for technical skills between recent graduates and senior professionals approaching retirement. It has been observed that mid-career ICT professionals with a few years of experience are going overseas or moving into management positions in large numbers (Harris 2011).

The Software Group Executive for IBM South Africa, Ravi Bhat, states that it is not just the size of the shortage in ICT professionals that is becoming more apparent, but the specific areas of skills shortage (Fripp 2012). More than 4 000 IT professionals from 93 countries and 25 different industries were surveyed by the 2011 IBM Tech Trends Report and it was found that cloud computing, mobile computing, social business and business analytics are precise ranges of skills shortage in the ICT industry (Fripp 2012).

South Africa's ICT industry is also facing a critical shortage of the skills needed to be efficient on large ICT projects (Harris 2011). A list of open technical jobs in South Africa was published by the country's Department of Home Affairs in 2011. This list demonstrates a need for about 1600 information and communications technology support technicians, 3 000 software and application programmers and nearly 3 000 project and other managers (Fripp 2012).

Across a range of disciplines and market segments, graduates with ICT diplomas, senior managers and especially mid-career professionals are still in high demand. This situation is expected to worsen before it recovers, especially as the industry convalesces from a long crash in demand for its products and services, because the skills problem begins with education system that is not delivering enough students with the science and mathematics marks they need to study computer science or electronic engineering (Harris 2011). The shortage of skills is a global crisis but there is a very serious shortage of skills in South Africa. South Africa and other developed countries are in competition for skills. Australia's Gold Coast, for example counts a large number of South African IT professionals in its personnel (Harris 2011).

Existing skills recruitment challenges mainly relate to high-level ICT honours Bachelor Degrees and above. These challenges are caused by a sharp decrease in the domestic supply of ICT graduates over recent years (Expert Group on Future Skills Needs 2012: 2). Universities and colleges are acknowledging reduced classes and less student concern in vocations in the computing disciplines (Shropshire & Kadlec 2012: 6).

McLachlan *et al.* (2010: 128) argue that during the past seven years since 2010, there has been a continual reduction in the number of students who chose to study ICT. This reduction is based on the students' lack of interest in ICT and not the

apparent difficulty of the subject. In Ireland, the acceptances for level 8 computing programmes in 2010 remain 20% less than for year 2000, even though the numbers of acceptance have increased by 29% over the last three years. Companies are hiring approximately 55% of their high-level ICT skills from private migration. This, however, is done with increasing difficulty as these skills are also in high demand globally, Germany, for example, has 400 000 unoccupied vacancies in business areas such as Maths, Informatics, Natural Sciences and Technology (Expert Group on Future Skills Needs 2012: 2).

Recent figures on the number of ICT alumni in the EU increase concerns. Even though their number increased from 71 000 per year in 2000 to 127 000 in 2006, it declined again in the following years, down to 114 000 by 2009. An additional problem arises comes from the growing number of ICT alumni leaving the labour force due to retirement. This number will rise from about 80 000 per year in 2010 to about 120 000 in 2015. Consequently, the number of ICT alumni in the work force will soon actually fall, whereas the number of ICT available jobs continues to increase (European Commission 2012: 7).

Several challenges have been identified while trying to meet the projected growth in ICT professionals' staff in Australia. Among those challenges there is a reduction in course enrolments (51% decrease in ICT and a 41% decrease in engineering between 2001 and 2007); a reduction in course completions (at the certificate/diploma level, 18% in ICT and 11% in engineering) and a limited number of graduates is employed in ICT role. It has been revealed that only 60% of graduates hired four months after graduation were in ICT jobs (Australian Government 2010: 18).

McLachlan *et al.* (2010: 2) revealed that the ICT industry has been described by many authors (for example Rommes, Overbeek, Scholte; Lynch 2007) as being male-oriented, uninteresting, poor work environment, and unexciting. The general perception of a person working in the ICT industry has been given by adolescents in Netherlands as one of a male with glasses, wearing unappealing clothing, with nerdy appearance (Rommes *et al.* 2007; Lynch 2007). One aspect shared in most countries is that the ICT sector in its thinnest sense is described to be a male-

oriented industry. This is particularly verified for the technical professions and the higher management levels sector (Tandon 2012: 16).

In 2007, an Organisation for Economic Co-operation and Development (OECD) report revealed that the number of women ICT-specialists is less than those of men, and further, that this number is in effect diminishing. This report also demonstrated that in the ICT jobs, there are many women in office and secretarial positions but fewer in scientific and professionals occupations (Tandon 2012:17).

There is renewed interest in attracting women into the ICT-talented labour force because there is an obvious reduction in the number of women in ICT jobs in more developed, high-value chain economies. This is in addition to a growing shortage of professionals to fill vacancies in the sector. In the past years, research conducted by the governments of South Africa, Canada and seven European countries and the private sector highlights the importance of the ICT sector to national economies and the necessity for more specified programmes to attract women into this field to create more employment prospects and revenue from income (Tandon 2012: 18).

More women must be involved in ICT and engineering disciplines. In Ireland, they represent only 15% of all such students. This tendency limits the potential pool of higher level graduates in maths that ICT department can recruit for its intake (Expert Group on Future Skills Needs 2012: 12).

Numerous persuasive reasons exist for employing women in the ICT industry. Among those reasons, there are the facts that economic growth can be encouraged by closing the male-female employment breach; there is a general escalation in the demand for technical workers; business performance is enhanced by gender mixture in leadership positions and woman are significant as market influencers and technology consumers (Tandon 2012: 24).

In the United States, women used to be interested in computer programming, in the 1970s, 25% of women were attracted into that field. In 1984, women with computer science knowledge peaked at 37%, since then women have quit computer science in multitudes, falling to 20% by 2006 (Tandon 2012: 17).

According to the IT salary survey (2011: 7), only 20% of employees working in the ICT industry in South Africa are women. A national report in South Africa

demonstrated that diversity in gender in ICT is a main concern for the government. The ICT sectors are shown to be undertaking more activities to see robust support for women in the ICT sector; both women who wish to improve their careers and young women entering the sector. Various efforts have been started throughout different departments (communication, trade and industry, education, communication sciences and technology) to attract women (Tandon 2012: 42).

Technology companies are exposed to numerous distinctive issues because of the fast pace of innovation and change in the technology industry. Among these issues there is the retention of skilled employees and the preservation of the company's most significant assets (Kachmar 2012: 2).

For several decades ICT employee retention has been a major challenge for many organisations. Highly skilled employees in the ICT area have demonstrated more loyalty to their own careers and personal development than to their organisations (Westlund & Hannon 2008: 1). Skills retention is gradually becoming a significant problem in organisations since dynamic competition for skills is acknowledged in the ICT industry. The majority of ICT firms state that career opportunities and job satisfaction are as vital to skills retention as remuneration (Harris 2011).

In Canada, an important number of jobs was lost. Despite the fact that the number of systems business analysts rose to over 5 000 new jobs in March 2012, computer programmers lost over 5 000 jobs, database administrators lost over 1 900 and electrical and electronics engineers lost over 1 400 jobs in the same month (Information and Communication Technology Council 2012: 5).

Smart employers recognise that the mixture of demand for top ICT professionals, high earnings, together with a generation that views careers differently and a restricted pool of new entrants into the market has generated an environment of opportunity for ICT people in an industry where altering jobs regularly is not only possible, but necessary (Rousseau 2012). The Jobvite Social Recruiting Survey reported that only under one third of ICT employers in USA in 2011 projected that employees would remain with their organisations for two years or less, whereas around half predicted contracts of between three and five years. Effectively, this means that the average ICT worker is expected to have between eight and twenty jobs in a forty years career (Rousseau 2012).

If CIOs were required to enumerate the biggest challenges faced by the South African ICT industry, chances are, most will cite high staff turnover. Employee turnover is costly and disturbing, and is usually unavoidable (Rousseau 2012). Employees' turnover has been slower recently because of economic uncertainty. PE Corporate Service' Annual IT Salary Survey 2011 revealed that staff turnover decreased from a high 22% in 2008 to 13% in the 2011 survey. While this important drop should be a reason to celebrate, it still efficiently means that 13 out of every 100 ICT employees changed jobs over the past 12 months (Rousseau 2012).

Career change intentions are mental preparations made by people who aim to pursue alternative professions. They are established on a mixture of factors, comprising work related attitudes, emotion, and perceived feasibility of the current arena. They may also comprise lack of financial reward, inflexibility, poor opportunities for development and especially low job satisfaction (Shropshire & Kadlec 2012: 7).

Lounsbury, Moffitt, Gibson, Drost and Stevens (2007) conducted a study that addressed the job and career satisfaction of IT professionals. The authors argue that eight traits (optimism, emotional resilience, work drive, assertiveness, openness, extraversion, conscientiousness, and vision-style) are significantly related to job and career satisfaction and that there is a positive relationship between job dissatisfaction of ICT professionals and employee turnover. This represents a serious problem in the ICT field. In return, an employee's job satisfaction has a huge influence on parameters concerning the organisation such as productivity, quality and performance (Lounsbury *et al.* 2007).

In the world and especially in South Africa, job satisfaction represents a big challenge in the ICT industry. It has been shown that in 2011, 35% of employees working in the ICT industry love their jobs, while 58% are still seeking for something new (IT salary survey 2011: 1). This can be explained by the fact that 41% of employees working in the ICT industry perceive that their salaries as not competitive. The primary reasons for leaving the ICT industry cited by 30% of the employees is the desire to earn more money followed by the aspiration to work with more challenging technology (IT salary survey 2011: 1). As in 2010, in 2011 18% of employees working in the ICT industry considered leaving South Africa, mostly due

to career growth opportunity and career prospects elsewhere, but also because of violence and crime in the country. The chosen destinations for immigration are the UK, Australia, Europe and the US (IT salary survey 2011: 4).

Due to the diversity of parameters involved in employee's job satisfaction, namely, norms, values, customs, civilisation, ethics, styles, requirement, behaviour and so on, to appreciate how an employee's job satisfaction really affects an industry is a multifaceted task (Ahsan 2009: 2). Furthermore, Buitenbach and De Witte (2005: 28) show that employees who are satisfied with their jobs represent good ambassadors for the organisation and are more committed to their jobs. Delfgaauw (2007: 299-317) argues that the level of employees' job satisfaction can explain their intention to quit or their actual departure. Job satisfaction is therefore considered as one of the most significant employee attitudes due to its positive work-related outcomes, namely, organisational commitment, enhanced employee's job performance and citizenship behaviour (Hawass 2012: 113).

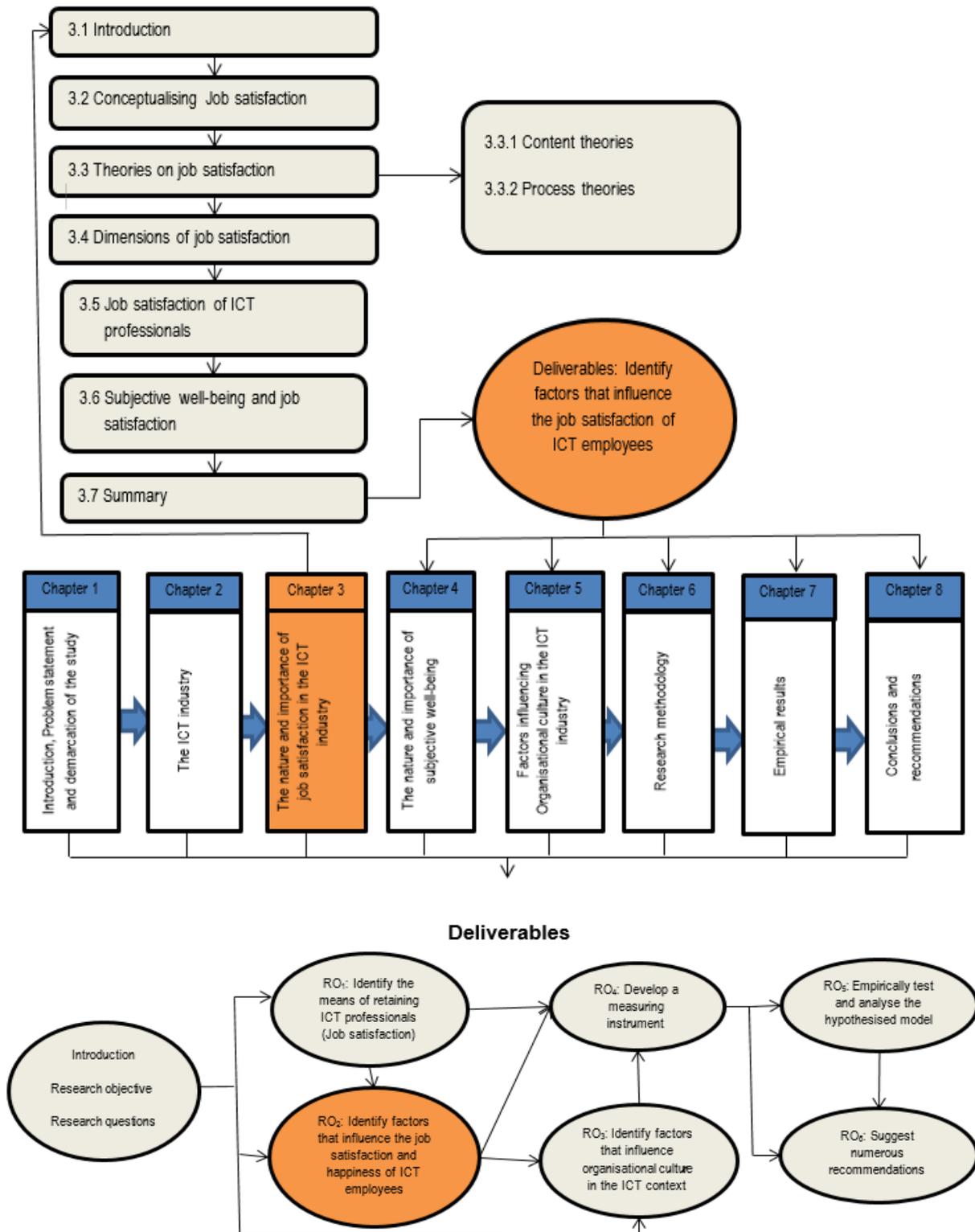
Based on the previous discussion, the following challenges have been identified:

- There is a scarcity of ICT professionals;
- There will be a critical shortage of ICT skilled workers in the near future;
- Several ICT companies and businesses in South Africa indicate that the ICT skill shortage has an impact on business operations and strategic growth;
- Existing skills recruitment challenges are caused by a rapid decrease in domestic supply of ICT graduates over recent years;
- There has been a continual reduction in the number of students who chose to study ICT. This reduction is based on the lack of interest in ICT and not the apparent difficulty of the subject;
- The number of women ICT specialists is lower than that of men; and
- The retention of skilled employees and the preservation of the company's most significant assets have been identified as a crucial challenge in the ICT industry and job satisfaction has been identified as a way to address this issue. Therefore job satisfaction will be the root of the discussion in Chapter 3.

2.6 SUMMARY

This chapter investigated the ICT industry. It started by conceptualising information and communications technologies. Numerous definitions of the concept were given but for the purpose of this study, the concepts, information technology (IT) and information and communications technologies (ICT) were used synonymously and were defined as a varied group of technological skills and resources which are used to generate, distribute, communicate, administer and collect information. The importance of ICT was then discussed. It has been proven that ICT influences almost all sectors in the economy in this century. The importance of ICT was highlighted in economies around the world in education, healthcare and banking sectors. Employees with the right skills set have been proven to be the key to a sustainable ICT sector, hence the job employment in the ICT industry was discussed. However, despite the fact that ICT is important, it came up with its own challenges. Several challenges were identified in the ICT industry among which retention of employees was critical. Job satisfaction was recognised as a solution to this problem and will be discussed in the following chapter.

Figure 3.1: Structure and deliverable of Chapter 3



CHAPTER 3

THE NATURE AND IMPORTANCE OF JOB SATISFACTION IN THE ICT INDUSTRY

3.1 INTRODUCTION

In Chapter 2, the growing importance of the ICT industry in general and its importance in different sectors of the economy were discussed. Employment in the ICT industry, as well as the numerous challenges encountered by the industry, were also highlighted. One of the crucial challenges faced by the ICT industry is the retention and conservation of skilled employees as one of the business's most valuable assets (Kachmar 2012: 2). In other words, the prevention of employee turnover has become critical, even in the ICT industry.

Job satisfaction has been proven to be a crucial predictor of employee turnover (Agarwal & Ferratt 2000: 159). Job satisfaction can be described as an agreeable sensation that people have about their work, based on the assessment of the features of the job (Parveen & Anbalagn 2012: 1). It has been demonstrated that the overall satisfaction with one's work environment strongly impacts on an employee's intention to leave, more strongly than pay satisfaction (Singh & Loncar 2010: 470-490). Furthermore, previous research (e.g. George & Jones 2008; Ghazzawi & Smith 2009; Robbins & Judge 2009) revealed that job satisfaction can be positively related to employee well-being, organisational citizenship behaviour, and organisational commitment.

On the other hand, dissatisfaction with structure, pay level and increases has been shown to be negatively correlated to employee turnover. Job dissatisfaction is also known to influence different withdrawal behaviours such as absenteeism, lateness, decision to retire and grievances (Zeffane, Ibrahim & Mehairi 2008: 237-250).

The aim of this chapter is to identify various factors influencing job satisfaction in general and in the ICT industry particularly. Happiness will then be identified as a major factor of job satisfaction. This chapter is therefore addressing the second research question and objective.

This chapter will commence by giving a clear understanding of the concept of job satisfaction (Section 3.2), followed by different theories on job satisfaction (Section 3.3). It will be demonstrated that motivation and job satisfaction are closely related and that theories of motivation represent the root of measures and models of job satisfaction. Two approaches will be discussed in more detail concerning the theories of job satisfaction, namely content (Sub-section 3.3.1) and process theories (Sub-section 3.3.2).

Content theories will comprise Maslow's need hierarchy, Herzberg's two factors theory, Alderfer's ERG theory, McGregor's Theory X and Theory Y, and McClelland's theory of needs. Process theories on the other hand will include a discussion on the expectancy theory, equity theory, goal-setting theory, and job characteristics theory. The different factors influencing employees' job satisfaction will then be elaborated on (Section 3.4), followed by the nature of job satisfaction in the ICT context (Section 3.5). No research was found on the impact of subjective well-being on job satisfaction in the ICT industry; hence this will be the focus of this study as it has been proven that happy employees are more engaged and productive (Fisher 2003: 753-77; Bakker & Oerlemans 2010: 6). Therefore the following part of this chapter will elaborate on the causal relationship between subjective well-being and job satisfaction (Section 3.6). The last part of this chapter will be a summary of the chapter (Section 3.7).

3.2 CONTEXTUALISING JOB SATISFACTION

Researchers in disciplines such as Organisational Behaviour, Industrial Organisational Psychology, Personnel and Human Resource Management and Social Psychology have extensively researched the topic of job satisfaction (Staples & Higgins 1998: 211-232; Cranny, Smith & Stone 1992). The number of books and articles on job satisfaction has been estimated to be in excess of 5000 (Spinelli & Canavos 2000: 29-33).

Despite all this research already being conducted, it has been concluded that there is no accepted definition of job satisfaction (Castro 2008: 91). Authors such as Locke (1976), Blum and Naylor (1968) argue that operational definitions of the concept are developed and the definition is based on whatever the researcher intended to measure. There has also been confusion between the concept of job satisfaction and

other concepts such as job morale and job involvement. Overall, job satisfaction and aspects of job satisfaction such as supervision, pay and promotion, are generally included in operational and conceptual definitions of job satisfaction (Cranny *et al.* 1992: 15). Therefore, in order to clearly comprehend the nature of job satisfaction, it needs to be further explained (Castro 2008: 91).

The most-utilised definition of job satisfaction is the one proposed by Locke (1976: 1304) who described it as an agreeable or positive feeling resulting from the assessment of one's job or job experiences. This definition underlined the importance of both affect or feeling and cognition or thinking. When a person thinks, he has feeling about what he is thinking. In turn, when one has feelings, one thinks about what one's feels. There is therefore a positive link between cognition and affect in human' psychology and even in biology. Consequently, when appraising individuals' jobs, as when evaluating almost everything important to people, both thinking and feelings are included (Rehman 2012: 78). Parveen and Anbalagn (2012: 1) define job satisfaction as a positive feeling that people have about their job, resulting in the assessment of the characteristics of the job. Garcez (2006) demonstrated that job satisfaction results from employees feeling that they accomplished proficiently and that their participation is appreciated and is worthy of recognition by employers. Job satisfaction can hence be described as a worker's sense of achievement and is generally described to be associated with improvement in work flow as well as with personal well-being (Cranny *et al.* 1992: 16).

In addition to the affect (feeling) and cognition (thinking) components of job satisfaction, some researchers (Graham 1982: 68; Robbins *et al.* 2003: 72; Parveen & Anbalagn 2012: 1) include the attitude component into the definition. Job satisfaction can therefore be described as the sum of an employee's total feeling and attitudes towards his/her job (Graham 1982: 68; Robbins, Odendaal, Roodt 2003: 72; Robbins and Judge 2007: 74; Parveen & Anbalagn 2012: 1). Langton and Robbins (2007: 91) describe job satisfaction as the overall attitude that individuals have towards their jobs. They added that satisfied employees have positive attitudes about their jobs, while their peers that are not satisfied with their work tend to have negative attitudes. Ivancevich and Matteson (2005: 122) add that job satisfaction is the attitude people have towards their jobs, which results from their opinion about the

job and the degree to which there is a good association between the individual and the organisation.

Moreover, McKenna (2000: 279) describes job satisfaction as how well outcomes are in line with expectations at work. Individuals who believe that hard work will result in fair rewards, will be satisfied if this happens. However, when individuals consider that their reward is not fair in comparison with the amount of work done by them, job dissatisfaction will occur.

Naumann (1993: 153-157) argues that there is two types of job satisfaction namely intrinsic job satisfaction and extrinsic job satisfaction. Intrinsic job satisfaction results from employees executing the work well and experiencing feelings of accomplishment, self-actualisation and uniqueness with their job and job description. Extrinsic job satisfaction, on the other hand, refers to employees being rewarded for job performance by superiors, co-workers or the organisation. These rewards can take the form of compensation, recognition or promotion.

Based on the discussion above, job satisfaction in this study will be based on the definition by Parveen and Anbalagn (2012: 1) and presents a positive feeling that individuals have about their job, based on the evaluation of the characteristics of the job. After a clear description of the concept job satisfaction, the following part of this chapter will review different theories linked to job satisfaction. These theories will mainly comprise content and process theories (Saif, Nawaz, Jan & Khan 2012: 1383).

3.3 THEORIES ON JOB SATISFACTION

Literature reviews show that job satisfaction has been a main topic for several researchers such as Crossman and Zaki (2003); Hunter (2007); Castro (2008); Hansia (2009); Malik, Danish, and Ghafoor (2009); Diala and Nemani (2011); Lumley, Coetzee, Tladinyane and Ferreira (2011); Letele-Mataboee (2012); Parveen and Anbalagn (2012) and so forth. Numerous researchers completed different studies whereby they attempted to establish a relationship between employee satisfaction and various other parameters such as relational-based factors (open communication, fairness, trust, personal needs alignment, inter relationships, family harmony), organisational-based factors (nature of the work, physical working

conditions, leadership, job involvement, organisational structure, and governance), reward-based factors (job security, promotional opportunity, and compensation), demographic factors (age, gender, tenure, cadre, and education) personality traits, recruitment and selection, autonomy, and opportunity for advancement (Letele-Mataboee 2012; Hansia 2009; Diala & Nemani 2011; Castro 2008).

The concepts of motivation and job satisfaction are often linked and theories of motivation have often formed the root of models and measures of job satisfaction. Motivation is a process that usually leads to job satisfaction (Mullins 1996: 520). Nowadays, the content and process theories have become popular theories that explain work motivation, even though a complete theory of motivation has not been substantially agreed upon. Additionally, features of job satisfaction and their reciprocal relations vary with the passage of time; consequently new models are developed as fresh explanations of old phenomena (Saif *et al.* 2012: 1383). The theories of motivation can be divided into two main categories namely content theories and process theories. These theories will briefly be discussed in the following sections.

3.3.1 CONTENT THEORIES

According to Borkowski (2005: 114) content theories or need theories elucidate the specific components that motivate individuals. The desire to satisfy individuals' inner needs represents the basic of these theories. Content theories help managers to have a clear understanding of what initiates, energises and arouses employee behaviour by answering the question: "what drives behaviour?" Content theories focus on the identification of people's needs and specify the characteristics that should be apparent in jobs (Gruneberg 1979; Staples & Higgins 1998: 211-232). The content theories that are widely used in management comprise Maslow's needs hierarchy, Alderfer's ERG theory, Herzberg's two factor theory, Theory X and Y, and McClelland's needs theory (Saif *et al.* 2012: 1383).

3.3.1.1 Maslow's needs hierarchy

Among various theories that have been applied to job satisfaction, one of the most important is that by (1943). Maslow's publication "*A theory of human motivation*" introduced his theory about how people satisfy numerous personal needs in the

context of their work. Based on this theory, there are universal patterns of needs and satisfaction that people track. According to Maslow, it is impossible for a person to chase the next upper needs in the hierarchy if his presently identified needs are not completely satisfied (Maslow 1943: 382). Maslow identified five vital needs starting from lowest-order needs to the highest namely: basic physiological needs, safety needs, social needs, esteem needs and self-actualisation needs (Maslow 1943: 382).

However, several criticisms have been raised against Maslow's hierarchy needs. It has been said that Maslow's theory is not a theory of work motivation. Maslow himself, however, did not intend that his theory be directly used for work motivation. Additionally, the hierarchy of needs basically does not exist. A person motivated by self-actualisation needs, for example, cannot allow himself to forget about satisfying his physiological needs as well. In addition, this hierarchy is different when applied to different countries (Aswathappa 2007: 359). Maslow's hierarchy of needs was developed in the USA for Americans. Therefore, it describes American culture (individualism) rather than the cultures of countries like Greece, Japan, Or Mexico (collectivism) (Saif *et al.* 2012: 1393).

3.3.1.2 Alderfer's ERG theory

Alderfer suggested the 'ERG theory' that accommodated some of the shortcomings in Maslow's theory. Similar to Maslow's theory, the ERG theory described needs as a hierarchy. The letters ERG describe the three ranked levels of needs which are: Existence, Relatedness and Growth (Ahsan 2009: 4). Conversely to Maslow, this theory supports the fact that even though lower-order needs have been satisfied, they are still important to individuals and are not outdated by higher-order needs (Fincham & Rhodes 2005: 198).

Alderfer's ERG theory is subjected to several criticisms. The ERG theory is more recent than the need hierarchy theory, and has yet reached neither such a high level of research interest, nor such a wide currency as has the needs hierarchy theory. Therefore, the empirical status of the ERG theory must be stated to be fairly ambiguous. Alderfer's study has shown some extent of support for the theory, but it is too early to judge the overall validity of the theory (Aswathappa 2007: 363).

3.3.1.3 Herzberg's two factor theory

Frederick Herzberg established his two-factor theory, also called the Motivation-Hygiene Theory, which is based on the assumption that individuals have two sets of needs, namely, avoidance of unpleasantness and personal growth (Borkowski 2005: 120). Herzberg, Mauser and Snyderman (1959) conducted a study on the "motivation to work" and they came up with the "Two-factor theory of job satisfaction". This study was undertaken by interviewing more than two hundred professional engineers and accountants in Pennsylvania and Pittsburgh to identify the factors that cause job satisfaction and dissatisfaction. The research done by Herzberg and his colleagues demonstrated what people actually expect from their jobs. Respondents of this research had to describe which work situation made them feel good or bad in their jobs. The results were then grouped into satisfactions or motivators (advancement, responsibility, achievement and recognition) and dissatisfaction or hygiene factors (administrative policies, supervision, company policies, interpersonal relations, salary, and working conditions) (Wubuli 2009: 16).

Herzberg's theory is acknowledged as the most beneficial model to study job satisfaction. However, several criticisms of this theory have been revealed. For instance, the theory overlooks individual differences and improperly assumes that all workers respond in the same way to an alteration in the motivators and hygiene factors (Saif *et al.* 2012: 1386). Additionally, Herzberg's theory has been demonstrated to relate least to unqualified workers or those whose jobs are repetitive, uninteresting, limited in scope and monotonous. Herzberg was also blamed for assuming a correlation between productivity and satisfaction while his research had not tested that relationship (Dartey-Baah 2011: 4).

3.3.1.4 McGregor's Theory X and Theory Y

Douglas McGregor is recognised as one of the prodigious popularisers of a human relations approach to management, and is best known for developing Theory X and Y (Schwalbe 2011: 347). In his research published in 1960 titled *The Human side of Enterprise*, McGregor revealed that even though many managers emitted the right ideas, they actually tracked a group of hypotheses about employees' motivation that he called Theory X and Theory Y (Schwalbe 2011: 347; McGregor 1960). According to, Schwalbe (2011: 347) the most important employees' rewards are the satisfaction

of self-actualisation and esteem, as described by Maslow. Theory X (negative view) supports that human beings have an intrinsic hate of work and avoid it if possible, need direction, avoid responsibility, and lack ambition (Saif *et al.* 2012: 1387). Theory Y (positive view) on the other hand, argues that physical and mental determinations in work are as natural as play and rest. External control and menace are not the only way for creating motivation; employees have self-control and direction, do not dislike work, and seek responsibility (Saif *et al.* 2012: 1387). McGregor recommended that managers motivate workers according to the more valid theory Y notions (Schwalbe 2011: 347).

However, Ghuman (2010: 358) raises some criticisms of McGregor's theory. According to him, most employees and managers are positioned somewhere in-between the two theories proposed by McGregor. Additionally, the rigidity of McGregor's model has been questioned lately even though Theory X and Theory Y remain a guiding principle of positive methods to management and organisational growth and for advancing organisational culture. Furthermore, it has been shown that no management theory can be applied in every organisation to the same extent because nothing is universally true (Ghuman 2010: 358). According to Mehta (2009: 45), Theory Y is a superior structure for encouraging increased productivity from employees without increasing their rewards. It is basically a situation of working harder for the same pay because according to this theory managers emphasise measures of productivity rather than measures of employee well-being.

3.3.1.5 McClelland's theory of needs

The American psychologist David McClelland developed a theory in the 1980s that clusters human motivation into a group of basic needs often referred to as "the three social motives". According to McClelland, every individual is intensely motivated by some needs and less intensely by other needs. The author argues that all the three needs or social motives (achievement, affiliation and power) are present in every individual to a different relative degree. A unique mix results from these needs and gives a person his/her personality (Hedberg, Hirth & Petzold 2002: 4; McClelland 1984). This theory, unlike Maslow's theory, does not stipulate the transition between needs. Employees who have a penchant for one of the above needs will feel satisfied in positions in which these needs are satisfied (Castro 2008: 84).

McClelland's theory, just like any other theory of motivation, has been criticised (Aswathappa 2007: 364). The first criticism of this theory questioned whether motives can be developed in adults. Significant psychological literature proposes that the development of motives normally happens in childhood and once it has been established, is very difficult to modify during adulthood. McClelland is the only researcher who supports that needs can be socially changed through training or education. Adversaries oppose the view that permanent change cannot be accomplished and that the modification is only temporary (Aswathappa 2007: 364).

Furthermore, the methodology used by McClelland and his associates to support the theory has been questioned. The Thematic Apperception Test (TAT) of Murray is a projective measure planned to assess an individual's pattern of thoughts, observational aptitude, attitudes, and emotional reactions to confusing test materials. TAT was used by McClelland and his associates as the basic tool to define basic needs. However the interpretation of responses when using this method has been revealed to be more subjected to researcher's bias (Aswathappa 2007: 364).

3.3.2 PROCESS THEORIES

Process theories centre on how individuals initiate, direct and maintain their motivation (International Research Center on Organisations n.d.: 2). According to Saif *et al.* (2012: 1388), process theories are more concerned about how the motivation takes place. Hence these theories endeavour to clarify how the goals and needs are accomplished and recognised cognitively. Major theories under this category include the expectancy theory, equity theory, goal-setting theory, and job characteristics theory (Saif *et al.* 2012: 1390).

3.3.2.1 Expectancy theory

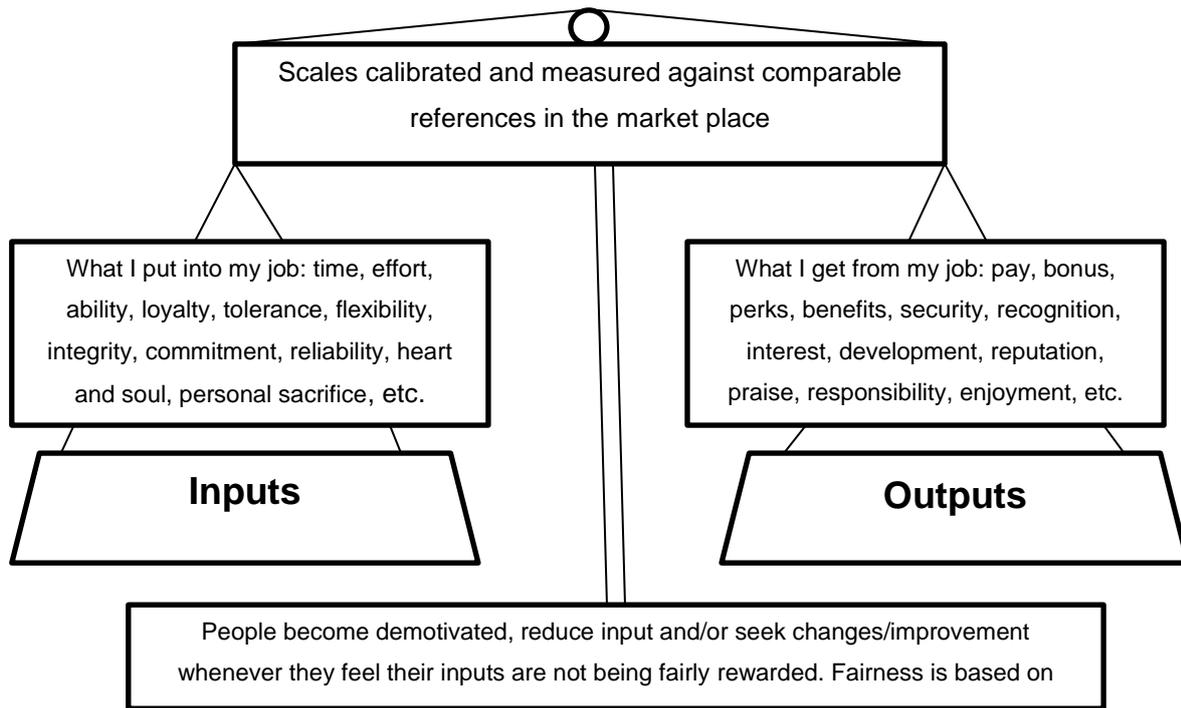
According to Erez and Isen (2002: 1055), expectancy theory can be considered as one of the most important motivation theories, and it has been shown that it can forecast an individual's effort and performance. Expectancy theory has been developed by Vroom (1964) and can be described as a cognitive process theory of motivation based on the hypothesis that individuals are able to assess benefits and costs by choosing from different courses of action (Stecher & Rosse 2007: 778; Vroom 1964). Expectancy theory assumes that individuals act on the rational choice

among expected outcomes. They allocate probabilities by a cognitive process to three factors, namely expectancy (individuals believe that their efforts will produce a certain level of performance), instrumentality (individuals believe that their performance will produce a certain outcomes), and valence (the worth individuals allocate to those specific outcomes) (International Research Center on Organisations n.d.: 2).

Numerous shortcomings have been identified in the expectancy theory. For instance, the connections between the three variables are still open to interpretation. It is also vital to determine what types of behaviours the model clarifies and to which scenario it does not really relate (Aswathappa 2007: 369). Additionally, contrary to the supposition of the expectancy theory that people make decisions intentionally, there are several situations where choices are made with no conscious thought. This is particularly true in the case of routine works. It is demonstrated that individuals usually make decisions and later try to justify them, rather than use the procedure specified in the expectancy theory to make a decision in the first place (Aswathappa 2007: 369).

3.3.2.2 Adam's equity theory

Adam's equity theory (1963; 1965) represents a dominant theory of distributive justice that is used in most management and almost all organisational behaviour textbooks as a main theory of work motivation. The equity theory developed by Adams (1963) argues that numerous factors affect employees' appraisal and perception of their relationship with their jobs. Individuals will be pleased if there is a positive relationship between what they put into their work (inputs) and what they receive out of it (outputs). Therefore, the theory is based on the belief that employees become dissatisfied if they feel that their inputs are higher than their outputs (Pride, Hughes, & Kapoor 2011: 287). Gruneberg (1979: 20) states that the principal point of this theory is the comparison between what an individual gains for doing a certain task and what others receive. People usually compare their situation with that of other individuals that they consider to be alike. Thus, if they note inequity would be to their detriment, individuals adjust their behaviour accordingly (International Research Center On Organisations n.d.: 2). Adam's equity theory is illustrated in Figure 3.2.

Figure 3.2: Adam's equity Theory

Source: Adams' equity theory 2001

The equity theory, just like the theory of motivation of other authors has received some forms of criticisms. The equity theory is developed on the idea of fair treatment, however not everybody appreciates the notion of fairness similarly. Therefore the equity theory is more likely to apply to individuals, who are ethically established. That is, individuals living in countries in which fairness and equity are valued (Aswathappa 2007: 372).

3.3.2.3 Goal-setting theory

Based on some 400 laboratory and field studies, the goal-setting theory was developed over a period of 25 years within Industrial/Organisational Psychology by Locke and Latham (1990; 2002). The goal-setting theory explores the relationship between the goals employees establish and the effort they need to expend to achieve that goal. Based on this theory, when a goal seems difficult to attain, a person is required to work harder in order to meet it. Hence, the most difficult goals will produce the highest performance. Satisfaction is attained when the goal is met (Castro 2008: 87). High or difficult goals are inspiring because one is required to achieve more in order to be satisfied when compared to low or easy goals. A

sensation of accomplishment in the workplace arises when employees see that there is a possibility to grow and meet job challenges by chasing and achieving goals that are important and significant (Locke & Latham 2006: 265). It is reasonable to assume that individuals work harder in order to achieve more difficult goals, however, the goal must not be so difficult that it is unattainable (Griffin & Moorhead 2011: 151).

The goal-setting theory has been tested in both field and laboratory scenarios and several criticisms resulted (Miles 2012: 89). It has been demonstrated that difficult goals may actually motivate people to participate in a multitude of counterproductive behaviours, such as discouraging colleagues who have competing goals, lying about one's evolution towards a definite goal, or unethical treatment of customer relations for accomplishment of a narrow goal-directed benefit (Schyns & Hansbrough 2010: 10). In addition specific goals can drive individuals to devote too much time concentrating on them to the disadvantage of other vital organisational behaviours, such as creativity, innovation and flexibility. Moreover the theory has overlooked the problem initiated by many goals being allocated for task performance and the time horizon when setting goals (Miles 2012: 89).

3.3.2.4 Job characteristics theory

Job characteristics are features of the individual employee's work and tasks that profile how the workers identify their specific role in the organisation (Saif *et al.* 2012: 1390). The job characteristics model comprises three major parts, namely, core job dimensions, critical psychological states, and employee growth-need strength (Daft & Marcic 2010: 421). The core job dimensions comprise skill variety, task identity, task significance, autonomy and feedback. The job characteristic model argues that the more these five components can be incorporated into the work, the more the employee will be motivated and the greater job satisfaction, performance and quality will be (Daft & Marcic 2010: 421). The jobs that are rich in motivating features generate psychological states, which in turn augment the possibility of preferred results. For instance, a sense of meaningfulness of work that leads to operative performance can be ignited by the importance of a job (Saif *et al.* 2012: 1390). The final element of the job characteristics model is called employee growth-need

strength, which refers to the fact that individuals have diverse needs for growth and development (Daft & Marcic 2010: 422).

The Job Characteristics Theory is also subject to criticism. One of the criticisms of this theory arises from cross-cultural differences. Intrinsic factors such as challenge, autonomy, recognition and achievement can be extremely motivating in first world countries such as the USA. Nevertheless, these factors may contribute little to satisfaction and motivation in third world countries such as Nigeria and might even cause demotivation (Daft & Marcic 2010: 422).

The majority of the motivation/satisfaction theories were developed in the USA by natives for natives. Therefore individuals need to be vigilant in stating that these theoretical models are effective across cultures in the same ways. For example, almost all the theories focus on individualism and achievement, which are pro-American features, therefore they do not necessarily apply to collectivism cultures which are present in countries like South Africa, Egypt, Zambia, Kenya etc. (Saif *et al.* 2012: 1392).

After this discussion about the different motivation theories, it is clear that numerous factors can influence an employee's job satisfaction. Therefore the next sections will focus on identifying various dimensions of job satisfaction, or otherwise known as factors influencing job satisfaction.

3.4 DIMENSIONS OF JOB SATISFACTION

Various factors which influence job satisfaction have been identified in previous research. Among these factors are: individual quality of work, commitment level, pay, career growth, work environment, supervisor's attitude, empowerment, feedback, performance evaluation, well- defined job responsibility, interest level in the job, process quality, organisational quality, employee morale and work ethics, availability of resources, communication level, training, absenteeism, turnover, organisational standard, quality of work output by the organisation, customer satisfaction, relation with co-workers and productivity of the organisation. Numerous factors influencing job satisfaction can be summarised in Table 3.1, together with supporting references.

Table 3.1: Factors influencing job satisfaction

FACTORS	DESCRIPTION	REFERENCES
Nature of the work	Nature of the job describes the degree to which a task provides an individual with opportunities for learning and personal growth, stimulating tasks, and the chance to be responsible and accountable for outcomes.	Baron 1983: 214; Byars & Rue 1991: 303; Cranny, Smith, & Stone 1992: 8; Robbins, Odendall, & Roodt 2003: 77; Aamodt 2004: 323; Fincham & Rhodes 2005: 218; Lee 2006: 185; Bargrain, Cunningham, Potgieter, & Viedge 2007: 337
Job involvement	Job involvement is defined as the extent to which employees are cognitively concerned with, preoccupied with, and engaged in their jobs.	Baron 1983: 214; Kreiter, Kinicki, & Buelens 1999: 199; Bargrain <i>et al.</i> 2007: 337; Schermerhorn 2009; Husain, Hussain, & Khan 2010: 263; Kramer 2010: 135
Co-workers	A co-worker is an individual who occupies a rank or position similar to that of other employees in a business.	Byars & Rue 1991: 303; Cranny <i>et al.</i> 1992: 8; Robbins <i>et al.</i> 2003: 77; Aamodt 2004: 323; Fincham & Rhodes 2005: 218; Bargrain <i>et al.</i> 2007: 337
Fairness	Employees' perception of fairness in the workplace affects their attitudes, performance and behaviour, which in turn affects an organisation's success.	Sharma 2004: 15; Coetzee 2005; Fujishoro 2005: 132; van der heyden, Blonde, & Carlock 2005

Table 3.1: Factors influencing job satisfaction (continued)

Trust	Trust is defined as the prospect that another person or group will have good conviction and make efforts to act in accordance with any obligation, either implicit or explicit.	Kets de vries 1993: 64; Appelbaum, Bartolomucci, Beaumier, Boulanger, Corrigan, Dore, Girard, & Serroni 2004; Firth-Cozens 2004; Callaway 2006; Wolfe 2010
Personal needs alignment	Personal needs alignment is described as the extent to which an employee's needs are correctly aligned with opportunities offered in the business.	Barach & Gantisky 1995; Kristof-Brown <i>et al.</i> 2005; Westover <i>et al.</i> 2009: 37
Compensation	Compensation refers to the extrinsic recompense that an employee obtains in exchange for the service achieved during a given period.	Baron 1983: 214; Byars & Rue 1991: 303; Cranny <i>et al.</i> 1992: 8; Robbins <i>et al.</i> 2003: 77; Aamodt 2004: 323; Fincham & Rhodes 2005: 218; Bargrain <i>et al.</i> 2007: 337
Promotional opportunities	Promotional opportunities refer to the chance for advancement and progress in a business.	Byars & Rue 1991: 303; Cranny <i>et al.</i> 1992: 8; Robbins <i>et al.</i> 2003: 77; Aamodt 2004: 323; Fincham & Rhodes 2005: 218; Bargrain <i>et al.</i> 2007: 337

Table 3.1: Factors influencing job satisfaction (continued)

Job security	Job security defines employees' subjective feelings about the future security of their work situation.	Baron 1983: 214; Byars & Rue 1991: 303; Yousef 1998; Heery & Salmon 2000: 183; Burchell, Lapido, & Wilkinson 2002: 93; Theodossiou & Vasileiou 2007: 72; Sharma & Kumar 2001: 772
Organisational structure	Organisational structure describes the formal and informal way in which tasks and responsibilities are allocated in an organisation.	Holland & Ritvo 2008: 126; Garland & McCarty 2009: 201
Leadership	Leadership involves the ability to create a manner to move forward, and to stimulate others to follow the selected route.	Baron 1983: 214; Byars & Rue 1991: 303; Cranny <i>et al.</i> 1992: 8; Robbins <i>et al.</i> 2003: 77; Aamodt 2004: 323; Fincham & Rhodes 2005: 218; Bargrain <i>et al.</i> 2007: 337
Open communication	Organisational communication is the procedure by which information is exchanged and understood by two or more people, usually with the purpose of motivating or influencing behaviour.	Koike, Gudykunst, Stewart, Ting-Toomey, & Nishida 1988: 98; Sharma & Kumar 2001: 648; De Nobile & McCormick 2008: 106

Table 3.1: Factors influencing job satisfaction (continued)

Physical working conditions	Physical working conditions describe the environments in which employees work.	Baron 1983: 214; Byars & Rue 1991: 303; Robbins <i>et al.</i> 2003: 77; Kinzl, Knotzer, Traweger, Lederer, Heidegger, & Benzer 2005: 214; Papanastasiou & Zembylas 2005: 151; Naik & Pradhan 2010: 2
Age	Age has been defined as the number of years someone has lived.	Malik, Danish, and Ghafoor (2009: 23-40); Crossman & Zaki 2003; Graham & Messner 1998; Castro 2008; Hunter (2007: 231-238); Hickson (2003: 357-367)
Gender	Gender is whether an employee is a man or a woman.	Malik, Danish, and Ghafoor (2009: 23-40); Crossman & Zaki 2003; Graham & Messner 1998; Castro 2008
Tenure	Tenure refers to the length of service in a job.	Malik, Danish, and Ghafoor (2009: 23-40); Crossman & Zaki 2003; Graham & Messner 1998; Castro 2008
Education	Education refers to employees' educational level	Malik, Danish, and Ghafoor (2009: 23-40); Crossman & Zaki 2003; Graham & Messner 1998; Castro 2008
Subjective well-being	Subjective well-being is defined as the extent to which a person weighs the overall quality of his/her life as enjoyable.	Boehm and Lyubomirsky (2008); Judge and Klinger (n.d.: 11); Bakker & Oerlemans 2010

Table 3.1: Factors influencing job satisfaction (continued)

Subjective well-being	Subjective well-being is defined as the extent to which a person weighs the overall quality of his/her life as enjoyable.	Boehm and Lyubomirsky (2008); Judge and Klinger (n.d.: 11); Bakker & Oerlemans 2010
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Source: Adapted from Letele-Matabooe 2012:65-93; Castro 2008: 92-101; Malik, Danish & Ghafoor (2009: 23-40).

Letele-Matabooe (2012: 6) in her research classified some of the above factors in Table 3.1 into three categories, namely: relational-based factors (open communication, fairness, trust, personal needs alignment, inter relationships, family harmony), organisational-based factors (nature of the work, physical working conditions, leadership, job involvement, organisational structure, and governance) and reward-based factors (job security, promotional opportunity and compensation). Letele-Matabooe (2012: 179-183) demonstrated that fairness, personal needs alignment, family harmony, interpersonal relationships, nature of the work, working conditions and job involvement in the context of family businesses are positively correlated to job satisfaction. No relationship was found between open communication, governance and job satisfaction.

Lama, Osmond and Mamoudou (2011: 84-85) found that there is a positive relationship between job security, compensation and job satisfaction. On the other hand, they found that promotional opportunity was not positively correlated to job satisfaction in family businesses.

Hansia's study on employees working at BKB limited in South Africa demonstrated that leadership, personality traits and recruitment, and selection are positively correlated to job satisfaction. Rewards on the other hand have been shown to be negatively correlated to employees' job satisfaction working at BKB limited (Hansia 2009: 113-114).

Numerous studies (e.g. Graham & Messner 1998; Crossman & Zaki 2003; Castro 2008) investigated the effect of demographic characteristics such as gender, tenure, age, cadre and education on job satisfaction. The results however tend to be

ambiguous revealing both positive or negative relationships between variables selected and their effect on job satisfaction. Crossman and Zaki (2003: 368-376) for example, revealed that female employees were more satisfied than their male peers with their pay, whereas Graham and Messner (1998: 196-202) found a different result in their study in the USA. Their results demonstrated that males were more satisfied with their pay than their female counterparts. Spector (2005) argues that most research has shown only few differences in job satisfaction levels among males and females. Crossman and Zaki (2003: 368-376) concluded that individuals with a higher educational level were more satisfied with their work.

Hunter (2007: 231-238) revealed that job satisfaction and age followed a U-shaped relationship. Respondents of 55 years and older showed the highest satisfaction levels in the organisation, younger employees (ages of 26-35 years) reported lower satisfaction, followed by employees in the age group of 36-45. Employees in the age group of 18-25 expressed higher satisfaction than the group 36-45, hence creating the U-shaped relationship (Hunter 2007: 231-238). Conversely, Oshagbemi and Hickson (2003: 364) in his study on UK academia demonstrated that job satisfaction is negatively correlated with increasing age and length of service.

According to Judge and Klinger (n.d.: 11) there is evidence that job satisfaction and subjective well-being are strongly and consistently positively correlated. All studies reviewed in their paper demonstrated a substantial relationship between job satisfaction and life satisfaction.

Boehm and Lyubomirsky (2008) investigated 99 longitudinal, experimental and cross-sectional studies and concluded that happy individuals report more satisfaction with their jobs than their unhappy peers. Happy people are more willing to take on extra role tasks such as helping colleagues and perform better on consigned work. Withdrawal behaviours such as absenteeism are less noticeable with happy individuals. Generally, happy individuals appreciate greater workplace success than less happy people.

Even though many factors have been shown to influence job satisfaction, this study will focus on the factors influencing job satisfaction in the ICT industry. Therefore the following section will elaborate on the job satisfaction of ICT professionals. In others

words, the following section will identify the job satisfaction components applicable to ICT employees.

3.5 JOB SATISFACTION OF ICT PROFESSIONALS

Jiang and Klein (2002) demonstrated that ICT employees can be hired basically by being provided with monetary rewards. However, employers cannot retain skilled ICT employees by increasing their monetary rewards. ICT professionals' requirements for job satisfaction and organisational commitment range beyond the bounds of their monetary rewards.

The popularity of ICT permits the consideration of job satisfaction in the ICT profession as it refers to the employees' level of satisfaction in relation to productivity in the business (Diala & Nemani 2011: 829). As the organisational environment carries on developing at a fast speed, management of all kinds of organisations continues to seek for new ideas and probable core capabilities and new skills in ICT employees. In order for a business to use their ICT employees to full capacity, it must assign ICT workers more correctly, which will generate a better sense of accomplishment and job satisfaction for ICT employees (Diala & Nemani 2011: 830).

Since ICT is a fairly new phenomenon, so is its management; there is a big gap between how ICT professionals should be managed and who should manage them. The constant changes in technology cause the vibrant nature of the ICT environment, and therefore require good and effective management in order to encourage a satisfying working environment (Diala & Nemani 2011: 830).

The workforce trends in the ICT industry have continued to present increased opportunities for ICT professionals all over the world, as well as recruitment and retention issues for the businesses that hire these employees. Consequently, research concentrating on the retention of workers in the ICT industry has received significant consideration over the past 20 years (Lumley *et al.* 2011: 101). The 21st century world of work is marked by the mobility of an extraordinary number of professionals as workers pursue satisfaction of their own personal demands. This trend results in rising attention among organisations about the retention of skilled employees (Lumley *et al.* 2011: 100).

A business's competitive advantage and eventually its existence can be rigorously influenced by the loss of main ICT professionals (Calisir, Gumussoy, & Iskin 2009: 49). Moreover, ICT professionals are hard to replace and have specialised abilities, which upsurges turnover expenses. The average cost of replacing skilled ICT employees has been proved to be double that of their annual salaries (Calisir *et al.* 2009: 49). In order to achieve and maintain a competitive advantage in the ICT industry, the satisfaction of ICT employees is critical (Diala & Nemani 2011: 830).

Joseph, Ng, Koh and Ang (2007: 550-551) combined in a narrative review with meta-analytic techniques to deliver important insights about existing research on the turnover of IT professionals. They identified a total of 43 distinct factors influencing the turnover of information technology professionals. These 43 factors are organised into six broad categories, namely: job related factors, individual attributes, perceived organisational factors, desire to move, job search and ease of movement. Similarly Shropshire and Kadlec (2012) in their study, attempted to identify the determinants of turnover intention in the ICT industry. Their model included three independent variables, namely, stress, job insecurity, and burnout. The result of the study demonstrated that there is a positive relationship between the independent variables (stress, job insecurity, and burnout) and the dependent variable (intention to leave the ICT field). In other words, ICT employees who suffer from stress, burnout, or are concerned about their job's security, are more dissatisfied with their job (Shropshire & Kadlec 2012: 11).

Calisir *et al.* (2009: 52) investigated the effects of job satisfaction, organisational commitment, stressors (such as role ambiguity, role conflict, work-overload and work-family conflict), job stress and locus of control on the intention among ICT professionals in Turkey to quit their jobs. They found a negative relationship between stressors, job satisfaction and organisational commitment. Moreover, job satisfaction is described by stressors and locus of control, while the impact of job stress on job satisfaction is demonstrated to be unimportant (Calisir *et al.* 2009: 52).

Diala and Nemani (2011: 835) revealed that the majority of ICT employees are not satisfied in their jobs. Additionally, they showed that businesses in general are uninformed about the job satisfaction components that apply to ICT professionals. Furthermore, it has been shown that a lot can be done to align the ICT environment

and ICT employees to create an environment of job satisfaction. It was demonstrated that dissatisfied ICT employees seek change. Some find solutions by applying for a job in other businesses, others by starting new careers (Shropshire & Kadlec 2012: 6). The main causes of ICT employees' dissatisfaction have been proven to be the pay they receive, the amount of work, lack of opportunities for advancement and company practices and policies (Ghazzawi 2008: 1-15). Nazim (n.d.: 3) in his study also found that software developers were slightly dissatisfied with promotion.

Several studies (Calisir *et al.* 2009: 49; McKnight, Philips, & Hardgrave 2009: 167-174; Korunka, Hoonakker, & Carayon 2008: 409-423) demonstrated that job satisfaction is one of the most significant factors affecting turnover intention among ICT employees. Even though Diala and Nemani (2011: 829) argue that all of the traditional job satisfaction components (benefits, having a good supervisor and agreeable colleagues, compensation, flexible hours, being recognised for their job and having the opportunity to grow within the organisation, having the opportunity to learn and increase their skills and the option to telecommute) apply to ICT professionals just as they do to workers in other industries, several researchers (Ghazzawi 2008: 1-15; IT Salary Survey 2011: 3; Ghazzawi 2011: 25-54; Lumley *et al.* 2011: 115) identified some job satisfaction components that are more specific to ICT employees.

According to the IT Salary Survey (2011: 3), the top ten factors that make employees working in the ICT industry happy are: a challenging job, job atmosphere, remuneration, career prospects, technical challenge, job security, flexible schedule, company reputation, quality of top management and health benefits.

Ghazzawi (2008: 1-15) demonstrated that the main sources of ICT employees' job satisfaction are: the ability to keep busy all the time, employment security, ability to conduct ethical behaviour, the chance to work alone on the job, supportive co-workers, good working conditions, and the chance to try their own techniques of doing the job. Moreover, Ghazzawi (2011: 25-54) investigated a study about the effect of age on the job satisfaction of 132 ICT employees in various Southern California Organisation. The result of this study showed that age does not affect job satisfaction among ICT employees in the United States.

In his study, Nazim (n.d.: 3) demonstrated that software developers were moderately satisfied with supervision, benefits, co-workers and nature of the work. A slightly agreeable relationship was found between job satisfaction and pay, contingent rewards, working condition and communication.

According to Pai, Yeh and Huang (2012: 25), during economic recession, ICT employees' job satisfaction is positively correlated with professional commitment, while work stress and professional commitment have been demonstrated to be negatively correlated.

Tan (2009: 7) discussed various factors influencing job satisfaction with an emphasis on how ICT outsourcing can affect job satisfaction. ICT outsourcing is described as the allocation of internal, related work to external sellers. The author revealed that ICT professionals identify ICT outsourcing as a threat to their job security. Furthermore, job satisfaction was demonstrated to be correlated to the perceived participation in the ICT outsourcing arrangement. There is a prospect that the overall perception may move from that of being a confrontational relationship to one of collaboration and shared benefit, when ICT professionals perceive greater control over the ICT outsourcing arrangement. Finally, Tan (2009: 7) established a positive relationship between job satisfaction and perceived outsourcing outcome. This can be explained by the fact that the result of any outsourcing initiative influences internal ICT employees as well.

Lumley *et al.* (2011: 115) in their study on ICT businesses in the province of KwaZulu-Natal, South Africa, demonstrated that in order to generate a working environment that encourages individuals to remain with their respective businesses, managers need to modify existing pay practices so as to provide fair pay, offer meaningful and challenging job tasks, and increase positive colleagues relationships. These authors found a positive correlation between job satisfaction of ICT employees and pay, supervision, fringe benefits, promotion, contingent rewards, nature of the work, relationship with co-workers and communication. Based on the previous discussion, a summary of factors influencing ICT employees' job dissatisfaction as well as job satisfaction can be presented in Table 3.2 with supporting references.

Table 3.2: Factors influencing ICT employees' Job dissatisfaction and job satisfaction

FACTORS INFLUENCING ICT EMPLOYEES' JOB DISSATISFACTION	DESCRIPTION	REFERENCES
Compensation <ul style="list-style-type: none"> • Pay 	Compensation refers to the extrinsic recompense that an employee obtains in exchange for his services during a given period.	Joseph, Ng, Koh, & Ang (2007: 550-551); Ghazzawi (2008: 1-15).
Nature of the work <ul style="list-style-type: none"> • Job stress • Burnout • Role ambiguity • Role conflict • Work-overload • Work-family conflict 	Nature of the job describes the degree to which the work provides an individual with opportunities for learning and personal growth, stimulating tasks, and the chance to be responsible and accountable for outcomes.	Joseph, Ng, Koh, & Ang (2007: 550-551); Ghazzawi (2008: 1-15); Shropshire & Kadlec (2012); Calisir <i>et al.</i> (2009: 52); Pai, Yeh & Huang (2012: 25).
Promotional opportunities	Promotional opportunities refer to the opportunities for advancement and progression in a business.	Joseph, Ng, Koh, & Ang (2007: 550-551); Ghazzawi (2008: 1-15); Nazim (n.d.: 3).
Organisational structure <ul style="list-style-type: none"> • Companies practices and policies 	Organisational structure describes the formal and informal way in which tasks and responsibilities are allocated in an organisation.	Joseph, Ng, Koh, & Ang (2007: 550-551); Ghazzawi (2008: 1-15).
Job Insecurity	Job insecurity describes powerlessness to maintain desired continuity in a threatened job situation.	Shropshire & Kadlec (2012).

Table 3.2: Factors influencing ICT employees' Job dissatisfaction and job satisfaction (continued)

FACTORS INFLUENCING ICT EMPLOYEES' JOB SATISFACTION	DESCRIPTION	REFERENCES
Nature of the work <ul style="list-style-type: none"> • Challenging job • Job atmosphere • Technical challenge • Flexible schedule • Ability to keep busy all the time • The ability to conduct ethical behaviour • The chance to work alone on the job • The chance to try their own techniques of doing the job 	Nature of the job describes the degree to which a work provides an individual with opportunities for learning and personal growth, stimulating tasks, and the chance to be responsible and accountable for outcomes.	IT salary survey (2011: 3); Ghazzawi (2008: 1-15); Nazim (n.d.: 3); Lumley <i>et al.</i> (2011: 115).
Compensation <ul style="list-style-type: none"> • Remuneration • Health benefits • Contingent rewards • Fringe benefits 	Compensation refers to the extrinsic recompense that an employee obtains in exchange for his services during a given period.	IT salary survey (2011: 3); Nazim (n.d.: 3); Lumley <i>et al.</i> (2011: 115).
Job security	Job security defines employees' subjective feelings about the future security of their work situation.	IT salary survey (2011: 3); Ghazzawi (2008: 1-15).

Table 3.2: Factors influencing ICT employees' Job dissatisfaction and job satisfaction (continued)

<p>Organisational structure</p> <ul style="list-style-type: none"> • Company reputation • Quality of top management • Supervision 	<p>Organisational structure describes the formal and informal way in which tasks and responsibilities are allocated in an organisation.</p>	<p>IT salary survey (2011: 3); Ghazzawi (2008: 1-15).</p>
<p>Promotional opportunities</p> <ul style="list-style-type: none"> • Career prospects 	<p>Promotional opportunities refer to the opportunities for advancement and progression in a business.</p>	<p>IT salary survey (2011: 3); Lumley <i>et al.</i> (2011: 115).</p>
<p>Physical working conditions</p> <ul style="list-style-type: none"> • Good working conditions 	<p>Physical working conditions describe the environments in which employees work.</p>	<p>Ghazzawi (2008: 1-15).</p>
<p>Co-workers</p> <ul style="list-style-type: none"> • Supportive co-workers 	<p>A co-worker is an individual who occupies a rank or position similar to that of other employees in a business.</p>	<p>Ghazzawi (2008: 1-15); Nazim (n.d.: 3); Lumley <i>et al.</i> (2011: 115).</p>
<p>Open communication</p>	<p>Organisational communication is the procedure by which information is exchanged and understood by two or more people, usually with the purpose of motivating and influencing behaviour.</p>	<p>Nazim (n.d.: 3); Lumley <i>et al.</i> (2011: 115).</p>
<p>Perceive participation in Outsourcing</p>	<p>ICT outsourcing is described as the allocation of internal related work to external sellers.</p>	<p>Tan (2009: 7).</p>

Eddington and Shuman (2008: 5) argue that features of satisfying jobs have been widely researched. However limited researches have been conducted about the influence of subjective well-being on job satisfaction in the ICT industry. Therefore this study will focus on the influence of subjective well-being (happiness) on job satisfaction in the ICT industry as there is always this conflicting statement made by human resources professionals and managers in businesses about whether happy employees can be considered as satisfied employees or not. Therefore, the influence of subjective well-being (happiness) on job satisfaction will be discussed in the following section.

3.6 SUBJECTIVE WELL-BEING AND JOB SATISFACTION

The subject of employee attitudes and job satisfaction has been exposed to confusion and debate among practitioners (Saari & Judge 2004: 1). According to Langton and Robbins (2007), people who experienced a high level of job satisfaction have positive attitudes about their jobs, while those with low levels of job satisfaction tend to be negative. Additionally, Diener and Biswas-Diener (2008: 221) demonstrated that happy people have more positive and cooperative attitudes than their unhappy peers. Happiness is not only feeling good but it is also beneficial for success. Diener and Biswas-Diener (2008: 85) add that happiness can increase workers' effectiveness on the job, hence showing the importance of happiness in the work environment.

The importance of the influence of subjective well-being (happiness) on job satisfaction has been highlighted by several past empirical studies (Bakker & Oerlemans 2010; Bakker 2009; Boehm & Lyubomirsky 2008). Boehm and Lyubomirsky (2008: 105) demonstrated that happiness is correlated with evidence of success in the work environment. Happy workers are shown to have more autonomous and attractive jobs, they have a higher level of job satisfaction, and they perform better in the workplace than their unhappy peers (Boehm & Lyubomirsky 2008: 105). Additionally, happy workers are more likely to participate in beneficial extra-role behaviours and are less prone to engage in withdrawal actions. Again, happy employees gather both interpersonal and material rewards (Boehm and Lyubomirsky 2008: 105).

Bakker and Oerlemans (2010: 6) argue that employees experiencing positive emotions at work are more engaged, happy and satisfied. Conversely, employees who generally experience negative emotions at work may suffer from exhaustion. Research has demonstrated that being self-motivated and being highly energetic are characteristics of engaged employees that influence events in their lives (Schaufeli, Taris, Le Blanc, Peeters, Bakker & De Jonge 2001: 422-428). Engaged employees create their own positive response, in terms of recognition, appreciation and success due to their high activity level and positive attitude (Bakker 2009: 50-72).

Eddington and Shuman (2008: 5) demonstrated that people, pleased with their lives, generally find more satisfaction in their jobs. Boehm and Lyubomirsky (2008: 110) added that happy people use more helpful strategies when negotiating, have more favourable opinions of themselves, and are more able and willing to help. All these contribute to greater level of job satisfaction (Boehm and Lyubomirsky 2008: 110).

Fisher (2003: 753-777) revealed in his research that more than 90% of respondents agree with the statement "a happy worker is a productive worker". An explanation of this statement can be found in the fact that happy people are energetic, approach-oriented, more active, interested in their work, sympathetic to their colleagues and obstinate when they encounter difficulties in comparison with unhappy individuals. Another explanation is that employees' happiness may engender more job-related resources. For instance, colleagues are more willing to provide social, instrumental and emotional support to their peers by acting in a pleasant way. Based on the previous discussion, it is clear that there is a positive relationship between happiness and job satisfaction hence the following hypothesis is proposed:

H¹: There is a positive relationship between *Happiness* and *Job Satisfaction*.

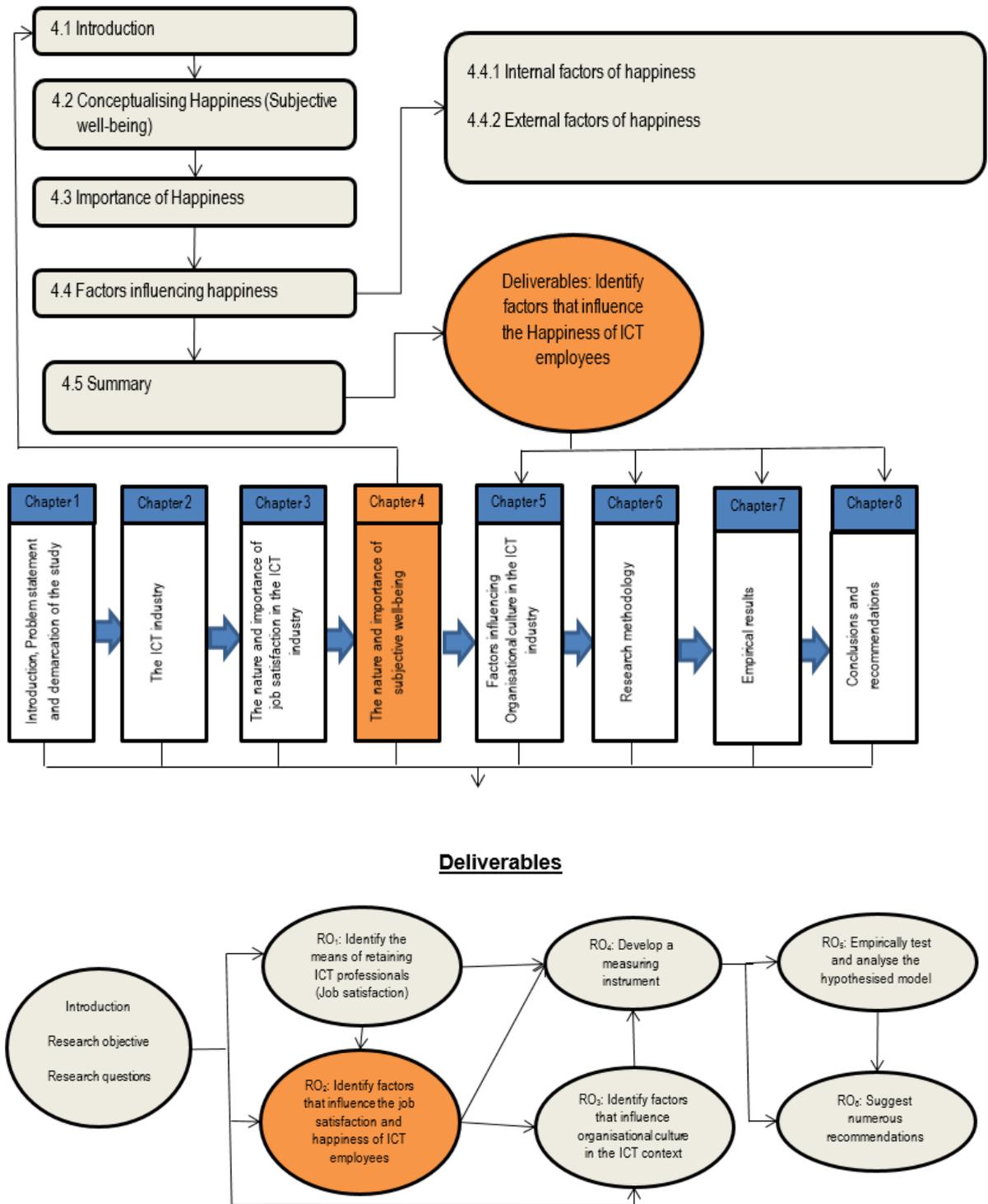
In order to have a clear understanding of the influence of happiness on job satisfaction, various factors of happiness need to be investigated. Happiness will therefore constitute the basis of the discussion in Chapter 4.

3.7 SUMMARY

This chapter started by specifying numerous definitions of job satisfaction but for the purpose of this study, job satisfaction was defined as a positive sensation that people have about their jobs, based on the evaluation of the features of the job. Theories on job satisfaction were then discussed. Literature showed that motivation and job satisfaction were linked and that theories of motivation constitute the basis of models and measure of job satisfaction. Two approaches were identified, namely, content theories and process theories.

Content theories comprised Maslow's need hierarchy, Alderfer's ERG theory, Herzberg's two factors theory, McGregor's Theory X and Theory Y, and McClelland's theory of needs. Process theories on the other hand included expectancy theory, equity theory, goal-setting theory, and job characteristics theory. The theories of job satisfaction demonstrated that numerous components influence employees' job satisfaction hence different factors influencing job satisfaction were then debated. ICT employees' job satisfaction was then discussed and it was found that little has been said on the influence of subjective well-being on job satisfaction in the ICT industry thus the focus of this study. The causal relationship between subjective well-being and job satisfaction was then illustrated to conclude this chapter hence introducing the next chapter that will deal with Subjective well-being (Happiness).

Figure 4.1: Structure and deliverable of Chapter 4



CHAPTER 4

THE NATURE AND IMPORTANCE OF SUBJECTIVE WELL-BEING

4.1 INTRODUCTION

The previous chapter investigated ICT employees' job satisfaction. Numerous theories on job satisfaction were identified, followed by a discussion on various factors influencing job satisfaction. Although all the traditional job satisfaction factors have been proven to affect ICT professionals as well (Diala & Nemani 2011: 829), some factors have been shown to be more applicable to ICT employees (Ghazzawi 2008: 1-15; IT salary survey 2011: 3; Ghazzawi 2011: 25-54; Lumley *et al.* 2011: 115). One of these factors is subjective well-being (happiness). In the previous chapter it was highlighted that limited research on this factor and its influence on job satisfaction especially concerning ICT employees, had been conducted. Therefore the focus of this study is on the influence of happiness on the job satisfaction of employees in the ICT industry.

A single indicator has mostly been used in the past to gauge society's well-being, namely, Gross Domestic Product (GDP). Even though GDP allows for simplicity (just adding up all the goods bought and sold), it is a direct instrument for calculating whether individuals and communities are actually happy. In fact it assesses the wrong variables. GDP has made individuals obsessed with economic growth and has ignored the most meaningful goods such as physical relationships, physical health, and ecosystem resilience that are all incorporated in subjective well-being (De Graaf & Musikanski 2011: 56).

The concept of subjective well-being (SWB) includes the scientific examination of how people assess their lives. These assessments comprise individuals' moods, their emotional responses to events, and their judgement about their life satisfaction, fulfilment, and satisfaction with domains such as work and marriage. Hence, SWB is the study of what people who are not qualified in psychology might call happiness or satisfaction (Diener, Oishi, & Lucas 2003: 404).

The subject of happiness has been discussed in one way or another throughout the history of humanity and in almost every culture of the world. The key to maximum happiness has been sought by human beings through philosophical thought, material

possessions, pleasure-seeking, and in numerous other ways (Martin, Perles, & Canto 2010: 618). The search for happiness has become one of the major focuses of Psychology and other Social Sciences. Lyubomirsky, Sheldon and Schkade (2005: 111-131) describe happiness as a feeling of subjective well-being characterised by a large amount of positive feelings, a low amount of negative feelings and elevated satisfaction with life. The concepts subjective well-being and happiness will be used interchangeably in this study. They will be described as the extent to which a person considers the overall quality of his/her life as enjoyable (Blanchflower & Oswald 2004: 1360).

The aim of this chapter is to identify different factors that can affect the happiness of an individual. This chapter is therefore addressing the second research question and the second research objective (RQ₂, RO₂).

A conceptualisation of the concept of happiness is to be presented in this chapter (Section 4.2). After a clear understanding of the concept, the role it plays in society will be elaborated on by means of stressing its importance in society (Section 4.3). Various factors will be identified as influencing happiness (Section 4.4). These factors will be classified into two categories namely internal and external factors. Internal factors will include personality factors such as extroversion, neuroticism, self-esteem, optimism, genetics, goals, and adaptation (Sub-section 4.4.1). External factors on the other hand will comprise of socio-demographic factors such as age, gender, religion, education, relationships, health and leisure. Economic factors such as wealth and institutional factors such as organisational culture will also be discussed as part of external factors (Section 4.4.2). The last part will be a summary of the chapter (Section 4.5).

4.2 CONCEPTUALISING HAPPINESS (SUBJECTIVE WELL-BEING)

The term subjective well-being (SWB) is generally used by some economists as a synonym for happiness, but in Psychology, happiness is narrower than subjective well-being. Blanchflower and Oswald (2004: 1360) in their research use the terms happiness and subjective well-being as synonymous and define happiness as the extent to which a person assesses the overall quality of his/her life as enjoyable. SWB comprises short-term affects or emotions as well as a general cognitive valuation of one's life which is life satisfaction (Howell & Howell 2008: 536-560).

Even though the two concepts are sometimes used as synonymous, they are actually different.

An explanation of the difference between happiness and SWB is provided by Bruni and Porta (2007: xviii). The authors argue that psychologists differentiate between life satisfaction that represents a cognitive element, affection which is the affective element and subjective well-being which comprises both affective and cognitive elements. SWB is described as a short state of comfort. Subjective well-being comprises different components such as happiness, cognitive assessments of one's life, satisfaction, positive emotions such as pride and joy and negative emotions such as worry and pain (Tinkler & Hicks 2011: 2).

Other clarifications of the difference between happiness and SWB stipulate that SWB is encompassed by four elements, namely, pleasant emotions, unpleasant emotions, global life judgement or life evaluation and domain satisfaction such as marriage, health and leisure (Bruni & Porta 2007: xviii). Diener *et al.* (1999: 277) define SWB as a broad category of phenomena that comprises people's emotional responses, global judgements of life satisfaction and domain satisfaction. SWB has been shown to include two specific components, namely, an affective and a cognitive part. The affective part comprises both positive and negative affect and is a hedonic assessment directed by feelings and emotions. The cognitive part, on the other hand, is an information-based evaluation of one's life in which individuals judge the degree to which their life, so far, measures up to their prospects and what looks like their intended, perfect life (Diener 1994: 106).

It is important that internal and external determinants of SWB should be distinguished. Internal components include factors within an individual that cause him or her to have a particular level of SWB independent of the person's environment. External determinants are components within a person's environment that influence the person's well-being (Schimmack 2006: 76).

The word happiness on the other hand, in the Greek culture was interpreted with the word "eudaimonia" which means happiness and fortune. The word "eudaimonia" originates from the verb "daoimai" which means to fate, to divide. Happiness can therefore be considered as good (eu) fate (daimon). The Greeks hence define happiness as something up to man which is allocated to him, not at his disposal

(Tenaglia 2012: 3). Even though happiness and life satisfaction are both included in SWB, life satisfaction represents the gap between an individual and his/her aspirations while happiness is the stability between positive and negative affect of individuals. Based on this approach, SWB is a synonym of “being happy” (the Aristotelian approach of happiness as *eudaimonia*) whereas satisfaction and happiness mean “feeling happy” (Bruni & Porta 2007: xviii).

Happiness is described as an expressive state which is sensitive to unexpected mood changes, whereas life satisfaction represents a cognitive and critical state which refers to a valuation of life as a whole (Vermunt, Spaans & Zorge 1989: 1-33; Tepperman & Curtis 1995: 255-270). Thinkers, from ancient Greeks and Buddhists to modern philosophers and politicians, have studied the nature of happiness (McMahon 2006). Some researchers have proposed that the connotation of happiness is alike across individuals (Myers & Diener 1995: 10-19; Layard 2005) whereas others have discussed that its meaning is exceedingly subjective and idiosyncratic (Gilbert 2006). The concept of happiness has been linked to other concepts such as jubilation, well-being, satisfaction and pleasure (Martin *et al.* 2010: 618).

According to Mogilner, Kamvar and Aaker (2010: 1) there is an active and foreseeable change in the meaning of happiness and how it is experienced over the course of one’s life. These authors are of the opinion that in their adolescence, people are more likely to link happiness with excitement, while as they get older they start to associate happiness with peacefulness.

Due to the confusion between the concepts happiness and subjective well-being and for the purpose of this study, they will be used interchangeably and will be defined as the extent to which a person weighs the overall quality of his or her life as enjoyable (Blanchflower & Oswald 2004: 1360). The following section will elaborate on the impact and importance of happiness on society. In other words the next section will focus on the importance of happiness.

4.3 IMPORTANCE OF HAPPINESS

The importance of happiness has already been acknowledged by the Ancient Greeks, for whom the notion of happiness was a matter of continuous argument.

Psychologists, who were mostly interested in negative emotional states such as anxiety and depression in the 1950s, became concerned with positive emotions and feelings of well-being. Within the discipline and an agreement grew that self-report on how well life is going, can express vital information on underlying emotional states, and so the field of Psychology pushed ahead with measuring what is best described as happiness (Hoorn 2007: 1).

Developments in the field of happiness mirrors bigger societal tendencies concerning the worth of the individual; the significance of subjective views in assessing life; and the acknowledgment that well-being essentially comprises positive components that exceed economic prosperity. The scientific study of happiness advanced in part, as a response to prodigious emphasis in Psychology on negative states. Psychological studies investigating negative states outnumbered those investigating positive states by a ratio of 17 to 1 during the year 1995 (Myers & Diener 1995: 10-19). Authors studying happiness acknowledge that individuals are interested in positive incentives and do not just dodge misery, and hence they started to examine the whole range of well-being from depression to ecstasy (Diener *et al.* 1999: 277).

Diener and Suh (1998: 304-324) in their research on the philosophical notion of utility demonstrated that happiness is one of the three main components to evaluate the quality of life of societies along with social and economic indicators. It is vital to assess how people think and feel about their own lives in order to understand happiness in any civilisation that gives importance not just to the views of leaders or experts, but to all individuals in the society. It is therefore important to maintain that happiness is a necessary but not sufficient component of the good society and the good life. As such, the field of happiness is of major importance to the Behavioural Sciences.

Moreover, researchers on happiness consider that social indicators alone do not describe quality of life (Diener & Suh 1997: 189-216). Individuals have different reactions to the same circumstances, and they assess situations based on their exclusive value, prospects, and earlier experiences. Even though income levels and crime statistics are significant to discussion of quality of life, the subjective component is vital (Diener *et al.* 1999: 277).

In the past, well-being has often been compared to the material situation of a country, measured by its Gross Domestic Product (GDP). Nevertheless, GDP does not reflect all the characteristics of human life and it was gradually acknowledged that new measures were required (Conceicao & Bandura 2008: 1). New pointers and datasets were developed to capture environmental and social features that GDP failed to include. These comprised indicators assessing health outcomes, education achievements and environment degradation. Economists have outdone the restrictions of their field by integrating findings from behavioural science and psychology into well-being research. This integration of findings has been conducted in an extensive literature on subjective well-being more commonly known as happiness (Conceicao & Bandura 2008: 1).

Research on happiness can brighten economic theory, bringing new knowledge. It can improve the theory of what motivates the utility function and how people make choices. Research on happiness also compensates for existing discussion, such as that self-reported satisfaction is not influenced by non-economic components or that work is considered a cargo for people (Frey & Stutzer 2007: 17-20; Stutzer & Frey 2010: 701).

Happiness can help policymaking by analysing its components. For example, certain policies that affect inflation and employment can be assessed with respect to how they affect happiness. One can examine the interchange in terms of happiness between unemployment and inflation and hence choose a policy that maximises happiness. Happiness is influenced by institutional circumstances, therefore growing accountability, transparency and social consistency may be required from the point of view of growing happiness (Stutzer & Frey 2010: 704). Happy people are recognised to have a more desirable life than unhappy people, to be better individuals and to be more likely to access heaven (King & Napa 1998: 156-165; Diener & Chan 2011: 2).

The fundamental belief of happiness research is that in order to understand the well-being of individuals, it is vital to assess individuals' cognitive and affective reactions to their whole life, and also to specific domains of life. Most prominently, happiness is able to determine individuals' actual experience in a direct manner, whereas environmental, economic and social indicators do so only indirectly (Diener & Suh

1997: 205). This is important because what is experienced does not have to overlap objective conditions, and certainly large deviation may be detected. In fact, it is frequently discussed that happiness indicators are convenient balances to objective indicators specifically because there is a disagreement between what individuals (reportedly) experience and with what is revealed in the objective indicators (Diener & Seligman 2004: 2-3).

The quality of life of an individual and of societies can be measured by happiness. For millennia, philosophers have discussed the nature of the good life and one conclusion that appeared from this discussion is that the good life is happy. Happiness is considered to be necessary for the good society and the good life, but not sufficient for it. No matter how attractive a society is in other aspects, it is difficult to imagine that a dissatisfied and depressed culture can be an ideal society. However, a person or society that possesses a high happiness might still be missing an ingredient such as fairness, which individuals might consider to be vital to high quality life (Diener *et al.* 2003: 405).

Other things have also been identified as being good; these are health and wealth, knowledge and friendship and a good moral character. Everyone wants them and would regret being dispossessed of them. Aristotle argued that all men recognise happiness as the crucial good, the highest good and the absolute good. This can be understood by the realisation that there is nothing more to be desired in the state of human well-being than happiness. Hence happiness represents something people seek for its own sake whereas the other goods are sought eventually for the sake of happiness (Adler 2009: 4-5). This vision of happiness demonstrated that many factors can influence happiness; therefore the next section will deal with the various factors influencing happiness.

4.4 FACTORS INFLUENCING HAPPINESS

Numerous researchers (Schimmack 2006: 76; Diener *et al.* 1999: 278-297; Oishi, Graham, Kesebir, & Galinha 2013: 22) distinguish between internal and external dimensions influencing happiness. The following paragraphs will elaborate these components of happiness.

4.4.1 INTERNAL FACTORS OF HAPPINESS

Internal dimensions of happiness represent features within individuals that cause them to be happy, independently and irrespective of their environment. Over the past three decades, psychological research demonstrated meaningful effects of internal determinants on happiness (Schimmack 2006: 76; Oishi *et al.* 2013: 22). There is a distinction between distal and proximal internal components of happiness. Distal processes can be genetic influences such as genetic predispositions to experience disagreeable feelings, whereas proximal internal components can be adaptation procedures (Schimmack 2006: 77). Diener *et al.* (1999: 278) demonstrated that results from internal determinants of subjective well-being are much stronger than results from external determinants. Internal factors that will be discussed below comprise personality factors such as personality traits, genetics, personal goals and adaptation.

4.4.1.1 Personality traits

The influence of personality on happiness has been intensely studied by psychologists and they found it to be the most dependable and strongest factor explaining the alterations in the happiness of individuals (Hoorn 2007: 6). Traits can be defined as behavioural reaction trends which demonstrate a degree of steadiness across situations and stability over time (Continuing Psychology Education Inc. 2008: 6). Even though many personality traits have been correlated to happiness, most researchers have focused on the traits of extroversion and neuroticism (Diener *et al.* 2003: 403-425; Diener *et al.* 1999: 278-297; Schimmack 2006: 77; Otonari, Nagano, Morita, Budhathoki, Tashiro, Toyomura, Kono, Imai, Ohnaka, Takayanagi 2012: 1847-1855).

Extroversion comprises characteristics such as stimulus seeking, high activity, sociability, dominance, warmth, and correlates significantly with pleasant emotion, such as affection and joy. Neuroticism on the other hand comprises characteristics such as irritability, pessimism, bodily complaints, anxiety and interpersonal sensitivity; in other words neuroticism correlates with a wide range of unpleasant thoughts and emotions (Continuing Psychology Education Inc. 2008: 7). Extroversion has been shown to influence positive affect whereas neuroticism impacts on negative affect (Hafen, Singh & Laursen 2011: 811). Numerous authors (Hafen,

Singh, & Laursen 2011: 807-817; Tay & Diener 2011: 355) demonstrated that extroverts were happier than introverts.

In the same manner, Headey and Wearing (1992) who developed the Dynamic Equilibrium Model, demonstrated that individuals with certain personalities most probably experience certain types of events. Extroverts for example, are more likely to get married and have a high-status job when compared to introverts, and this has an impact on an individual's overall well-being. Infrequent events can move an individual below or above this baseline level, but based on these authors, the individual will ultimately return to baseline as events get back to normal (Headey & Wearing 1992).

Other authors (Yuan, Zhang, Zhou, Yang, Meng, Zhang & Li 2011: 1-18; Yuan, He, Lei, Yang, & Li 2009: 1071-1076) have revealed that variances in happiness are due to variances in emotional reactivity. Based on Gray's Theory of Personality (1970), it has been proven that extroverts are more sensitive to pleasant emotional stimuli than introverts, and stable individuals are less sensitive to unpleasant emotional stimuli than neurotic people. Although there has been some evidence for individual alterations in reactivity in laboratory study (Yuan, He, Lei, Yang & Li 2009: 1071-1076), support of real-world reactivity evaluated in experience-sampling researches has been mixed, and the small variances in reactivity that have been shown do not account for all of the covariance between personality and happiness (Gable, Reis, & Elliot 2000: 1135-1149). Yuan *et al.* (2011: 2) demonstrated that the personality traits of neuroticism and extroversion, as well as momentary affective traits and long-term affective traits, are linked to individual changes in the processing of emotional content.

There is support that individuals will most probably observe, attend to, and remember trait-congruent or emotionally congruent information better than incongruent ones. Gomez, Allemand and Grob (2012: 317-325) revealed that introverts were faster than extroverts to move their attention away from rewarding stimuli. Yuan, He *et al.* (2009: 1071-1076) demonstrated that extroverts connected events more quickly to their drives when they were in positive mood, while introverts did so when they were in negative or neutral mood.

Self-esteem has also been demonstrated to have an impact on happiness. Self-esteem is described as the amount of value individuals place on themselves (Baumeister, Campbell, Krueger & Vohs 2003: 2). Many clinicians argue that self-acceptance is compulsory for psychological well-being (Continuing Psychology Education Inc. 2008: 7; Osborne & Taylor 2010: 883). Herero and Extremera (2010: 124) argue that there is a strong relationship between self-esteem and happiness in western nations. However Diener and Diener (1995: 653-663) established that the strong relationship between the two constructs is not universal. They found that the relationship between self-esteem and happiness is lower in collectivist societies such as Japan, China, Italy, India and African countries.

Another trait that has been mentioned in literature which has a positive influence on happiness is optimism. Optimism can be defined as the extent to which individuals expect favourable outcomes from their life (Continuing psychology Education Inc. 2008: 8). In their research, Diener and Chan (2011: 1-43) argue that optimism is a widespread predisposition to expect favourable outcomes in life. Herero and Extremera (2010: 124) demonstrated that optimists should accomplish more and experience more good things, as their expectations lead them to behave in a way that bring them closer to their goals. Pessimists on the other hand give up too quickly; have fewer positive and more negative consequences as outcomes of their failure to accomplish important goals (Herero & Extremera 2010: 124).

4.4.1.2 Genetics

Limited studies have established the relationship between genetics and pure measures of happiness. More researches have established the relationship between genetics and personality components that forecast happiness such as extroversion or neuroticism; however the findings are quite consistent across different measures (Schimmack 2006: 77).

Temperamental predisposition for happiness discusses the relationship between personality and happiness and shows that some people possess a genetic predisposition to be happy or unhappy, which is the result of innate individual differences in the nervous system (Diener *et al.* 1999: 279). In general, it has been shown that between 44% and 52% of the variance in happiness is caused by genetic variability (Li, Liu, Ye & Zhang 2013: 2).

Evidence regarding the influence of genetics comes largely from studies with twins. In adoption-twin research, any resemblance between twins raised separately is explained by their shared genes as they grew up in distinct environments (Schimmack 2006: 77). Tellegen, Lykken, Bouchard, Wilcox, Segal and Rich (1988: 1031-1039) in their well-known research compared the happiness for monozygotic and dizygotic twins reared apart and reared together. Their results demonstrated that 40% of the variance in positive feelings and 55% of the variance in negative feelings is attributable to genes, while shared familial circumstances account for only 22% and 2% of detected variance correspondingly.

In other domains, such as assessment of personality, the genetic contribution to happiness increases from 40% to 70% in studies that utilise compound methods like self-ratings and information ratings, in order to exclude systematic assessment error in self-rating (Schimmack 2006: 78). The importance of inborn traits has been demonstrated to be influenced by the types of questions asked about happiness. It has been shown for example that by looking at happiness within people over time, life changes and life events are revealed to have significant impacts for well-being beyond the effects of personality. Yet, despite the origins of individual differences, personality and happiness, investigators must develop accurate theories that can elucidate why certain persons are frequently happier and more satisfied with their lives (Lucas, Clark, Georgellis & Diener 2002).

4.4.1.3 Personal goals

The types of goals that one wishes to achieve, the structure of one's goals, the ability that one has to achieve one's goal and the rate of evolution towards one's goals have an impact on one's emotion and happiness (Gomez, Allemand & Grob 2012: 317). Goals are described here as what individuals are typically trying to achieve in life (Diener *et al.* 1999: 284). Gomez, Allemand and Grob (2012: 318) revealed that positive affect is correlated to the degree to which people attain their goals, whereas negative affect is related to uncertainty about goals attainment and that happiness was higher for people who had goals that were significant to them.

According to Elliot (2013: 416), individuals' behaviours can be best understood by investigating the goals that they are trying to achieve in their lives and how well they are succeeding at it. The structure of one's goal, the types of goals one has, the rate

of progress toward one's goals, and the success with which one is able to accomplish one's goals can all possibly affect one's emotions and life satisfaction. The general conceptual model is that individuals react positively when making progress towards their goals and react in negative ways when they fail to accomplish their goals. Therefore, a dominant idea is that goals represent a vital reference standard for the affect system (Elliot 2013: 416).

The importance of having goals has been emphasised by Diener and Chan (2011: 27). The authors demonstrated that being committed to a set of goals delivers a sense of structure and meaning to daily life and a sense of personal agency. Furthermore, being committed to goals may help individuals handle various problems in daily life and hence sustain social as well as personal well-being in times of difficulty. Romero, Gomez-Fraguela and Villar (2012: 45-55) in their study, investigated the idea that events, circumstances, and demographic factors may influence happiness primarily when they ease progress toward goals. The authors demonstrated the importance of the type of goals. They distinguished between intrinsic and extrinsic goals. Intrinsic goals are related to personal growth, community involvement and emotional intimacy. Intrinsic goals directly satisfy basic psychological needs such as relatedness, autonomy, and competence. Extrinsic goals, on the other hand, comprise appealing appearance, financial success, and social recognition. They do not directly satisfy basic human needs and include obtaining positive evaluation and rewards from others. The authors support that according more importance to intrinsic than extrinsic goals will therefore encourage happiness (Romero, Gomez-Fraguela & Villar 2012: 45).

4.4.1.4 Adaptation

Another vital internal determinant of happiness is found in studies that show adaptation and change in life circumstances. Adaptation is defined as the reduced responsiveness to repeated or continued stimuli. Adaptation or habituation to current situations is a central determinant of modern theories of happiness. Development equipped us to make adjustments to external conditions (Diener *et al.* 1999: 285). Studies show that recent events have a greater impact on happiness than events that happened in the past (Schimmack 2006: 79; Helliwell & Barrington-Leigh 2010: 733). A commonly cited study by Brickman, Coates and Janoff-Bulman (1978: 917-

927) revealed a surprisingly small difference in happiness between a group of quadriplegics and paraplegics and a normal group only few months after the latter groups' lives changed dramatically.

Adaptation processes represent an important challenge to the purpose of public policy makers to ameliorate well-being. An exclusive literature review on external determinants of happiness addresses this problem and reveals that individuals do not adapt to all life circumstances (Schimmack 2006: 79).

4.4.2 EXTERNAL FACTORS OF HAPPINESS

The correlation of demographic and other environmental factors with happiness has been the subject of extensive research (Continuing Psychology Education Inc. 2008: 2; Stutzer & Frey 2010: 679-714). External factors that will be discussed in the following sections include socio-demographic, economic, institutional and environmental factors.

4.4.2.1 Socio-demographic factors

Socio-demographic factors that are widely discussed in the literature are age, gender, marital status, religion, education, health and relationships with relatives (continuing Psychology Education Inc. 2008: 2; Blanchflower & Oswald 2008: 1733-1749). The relationship between age and happiness was found to be ambiguous. Numerous studies (Tsou & Liu 2001:272; Blanchflower & Oswald 2004: 11; Gredtham & Johannesson 2001: 553-557; Frijters & Beatton 2011: 1-42) found a U-shaped relationship between happiness and age. In other words happiness has been identified to be high during adolescence, declines at 30 and increases again when people reached a retirement age.

Blanchflower and Oswald (2008: 1733-1749) offer some explanation for the U-shaped relationship between age and happiness. One explanation is that people learn to adapt to their strengths and weaknesses, and in mid-life conquer the objectives of their youth. Another explanation is that happy individuals live longer than sad ones, and that the U-shape in a manner traces out in part a selection result. The third explanation is an evaluation outcome: individuals see their relatives die as they grow older so they learn to value what they possess during the remaining years. Some researchers (Tokuda & Inoguchi 2008: 349-360; Frijters & Beatton 2011: 25)

however, demonstrate a weak relation between happiness and age. Diener, Sandvik, Seidlitz and Diener (1993: 195-223) found that age was not significant in determining happiness because people would adapt their objectives as they grew older.

According to some psychologists (Graham & Chattopadhyay 2012: 3; Frey & Stutzer 2010: 55) women have been shown to have higher self-reported happiness in comparison to men, even if the difference is small. In contrast Tsou and Liu (2001: 272) showed a weak correlation between gender and the degree of happiness after monitoring the social background variables. Indeed, when specific subsections are observed, such as those who are unable to work due to health problems or those who provide informal care for others, the gender effect often disappears (Dolan, Peasgood & White 2008: 99).

Studies on religion also revealed different results when investigating its influence on happiness. Frey and Stutzer (2002: 4) found a weak relationship between religion and happiness. The explanation for this finding is that the connection is from happiness to religion, because happy people are not likely to need religion, while the opposite is more likely. On the other hand, some evidences (Dolan *et al.* 2008: 106; Diener & Biswas-Diener 2008: 121; Helliwell 2006: 34-45) show that individuals' beliefs affect their happiness, with religious people usually reporting higher of happiness, irrespective of their faith (Christian, Judaism, Hinduism, Buddhism, etc.).

Diener and Biswas-Diener (2008: 121) show that being raised in a religious environment and attending church services as a child is positively correlated with happiness even if the person is not religious as an adult. However, Dolan *et al.* (2008: 106) warns that there is a large variance in happiness scores within the same religions, suggesting that people differences are important and it would be imprudent to talk generally about all Catholics, all Jews, etc. Moreover, within religions, the strength of people's beliefs is different as well as their degree of spirituality and the degree they use God to help handle difficulties in their lives, all of which have been found to be correlated to happiness (Dolan *et al.* 2008: 106).

A small but significant number of studies has found a correlation between education and happiness (Dolan *et al.* 2008: 100; Blanchflower & Oswald 2011: 7; Frey & Stutzer 2010: 49). Blanchflower and Oswald (2011: 7) found that highly-educated people are the happiest one. Moreover, Stutzer (2004: 16) found that middle level of

education is correlated to the highest level of life satisfaction. Dolan *et al.* (2008: 100) support that the coefficient on education is often responsive to the presence of other variables within the model. Education is generally positively correlated with health and income, and if these variables are not controlled, the education coefficient is expected to be strongly positive. For example Blanchflower and Oswald (2011: 7) found that when the effect of the variable income was controlled, the relationship between education and happiness became insignificant. This is explained by the fact that social well-being was credited to income but not education alone. However, the insertion of variables correlated with education as controls raises a new problem: if the relationship is caused in part to a causal path from education to, say higher income, completely monitoring for income will undervalue the full participation that education is making to well-being (Dolan *et al.* 2008: 100).

Diener and Chan (2011: 21) underlined the importance of social relationships to successful human functioning. Helliwell and Huang (2013: 1) revealed that individuals are happier when with friends or family than alone. Additionally, Helliwell and Wang (2011: 67) found a positive relationship between happiness and the number of friends, frequency of seeing them, going to parties and dances, and belonging to teams or clubs. Regular sex was also correlated with higher positive happiness, and since the effects were stronger when this was with the same partner, it showed that being in a caring relationship is more important for well-being than simply being in a less close or a string relationship (Dolan *et al.* 2008: 106).

Tokuda and Inoguchi (2008: 349-360) reveal that marital status was one of the vital determinants of happiness. Married people are shown to be happier than single people. It has been shown that married persons experience greater happiness than persons who have never been married, divorced or separated (Tsou & Liu 2001: 272). Some explanations of the positive impact of marriage on happiness are that marriage offers extra sources of support, self-esteem and companionship (Frey & Stutzer 2002: 4). Additionally, Diener *et al.* (1999: 290) demonstrated that marriage and happiness are positively correlated and that men have greater benefits from marriage than women. Diener, Gohm, Suh and Oishi (2000: 419-436) investigated a sample of 59 169 individuals in 42 countries and revealed that the relationship between marital status and happiness is comparable across the world, taking cultural aspects into consideration. Dolan *et al.* (2008: 107) demonstrated that individuals'

happiness tends to decrease in the period leading up to divorce or widowhood and takes an amount of time to stabilise again, and that it may never reach original standard levels. However, it has been shown that when some people appear never to fully recover, others recover fairly quickly. Finding someone new has been proven to be often linked to a return to the original standard level of well-being (Dolan *et al.* 2008: 107).

Both physical health and psychological health have been demonstrated to be highly positively correlated to happiness. Psychological health was demonstrated to be more highly correlated with happiness than physical health. This is not surprising based on the close relationship between psychological health and happiness (Dolan *et al.* 2008: 100). Most previous research found that individuals that report their own health as poor are more likely to feel unhappy (Frey & Stutzer 2010: 56; Tokuda & Inoguchi 2008: 349-360). However, Diener and Chan (2011: 1-43) are of the opinion that the correlation between poor health and happiness is weak because individuals can adjust to their changes of health status over time. Oswald and Powdthavee (2006) present some evidence that individuals adapt to some extent to disability status, finding that the negative impact of the disability is reduced by the length of time an individual has been experiencing the disability.

Conversely, Easterlin (2004: 26-33) argues that adverse health changes have a permanent negative influence on happiness. Even though individuals have strong flexibility and can cope, adaptation is inadequate to weakening health in the case of austere changes in health (Gilbert 2006: 166-168). Individuals that have been in an awful accident or suffered from a fatal illness demonstrate lower happiness than their peers (Easterlin 2004: 26-33).

Nawjin and Veenhoven (2011: 39) state that leisure is the most or one of the most important components of happiness. Numerous other studies (Nawjin & Veenhoven 2011: 39-53; Hoorn 2008: 1-11; Wang & Wong 2011: 1813-1816) support the idea that leisure is positively correlated to happiness. Caldwell and Faulk (2013: 41-60) added that adolescent leisure forecasts adult happiness. Ferrer-i-Carbonell and Gowdy (2007: 509-516) support that there is evidence that even simple types of exercise such as gardening is correlated with happiness and this is particularly important for the over 60s. The amount of time engaged in physical activity among

the over 60s was also correlated to depressive symptoms (Baker, Cahalin, Gerst, & Burr 2005: 431-458).

4.4.2.2 Economic factors

The micro foundations of economics have demonstrated that relaxing people's budget limits increases their choice set between goods, services and leisure and, this, given rational behaviour and freedom of choice, will also lead to increased happiness (Dockery 2005: 323).

Numerous studies, starting with Easterlin (1974) have used data at the country level to compare a country's average happiness against gross national product (GNP) per head. Some evidence of a positive relationship between happiness and GNP but not a strong one has been shown by the resulting graphs. Moreover the plot of well-being against prosperity does not look linear. Higher income is correlated with increased happiness for poor countries, but the correlation is less strong in richer countries (Clark & Oswald 2002: 1142; Easterlin 1974).

One of the main arguments supported by the Easterlin Paradox is that in addition to absolute consumption, happiness is based on relative consumption (the amount one consumes in comparison to what others consume). This was proposed by Easterlin as a possible solution to his own paradox, and has become the topic of a broad literature that largely recommends that happiness does depend partly on relative consumption. Increasing everyone's income does not increase everyone's happiness because when equated to others, the level of incomes have not risen (Easterlin 1995: 35-48).

Easterlin and Sawangfa (2010) also commented on the results of Easterlin (1974) and supported the view that based on this paradox, within a country, poorer individuals, on average, report lower happiness than richer individuals in the same country. However an assessment between countries demonstrated only an insignificant relationship between income levels and happiness. Furthermore, within states, an upsurge in per-capita income over time is not correlated with increased happiness. Easterlin's paradox has strongly recognised the importance of relative income, but for aggregate-level income there is still contradiction in discussion.

Discussion about the most important of all economic variables influencing happiness is still ambiguous in literature. The role of the gross domestic product (GDP) and GDP growth is still vague. In their time-series study, Graham and Chattopadhyay (2012: 6) revealed that GDP and GDP growth are significantly linked to happiness, but only when down-trending time dummies are involved in the regression equation.

Conceicao and Bandura (2008: 2) argue that despite the fact that it is frequently proclaimed that economists are primarily interested with GDP levels and growth, it is vital to step back and remember that what matters most as an objective function is an individual's well-being. A central statement of standard economic analysis is that individuals' well-being increases with consumption (of food, housing, clothing, entertainment, and many others goods and services). It is based on this statement that GDP, all production, consumption and investment of a country in a year is so frequently taken as the index of well-being and progress. The fact that GDP describes the addition of consumption and investment should, by itself, give a hint that GDP may not be the perfect index of well-being. A large upsurge in GDP can be correlated to growth in investment rather than consumption, hence demonstrating the fact that GDP itself does not automatically mean enhanced well-being (Conceicao & Bandura 2008: 2).

Researchers disagree about the relationship between wealth and happiness. Some researchers (Diener *et al.* 2003:411; Diener & Biswas-Diener 2008; Kahneman, Krueger, Schkade, Schwarz & Stone 2006: 1908-1910) support that wealth raises happiness only up to a certain level after which extra increases in wealth no longer participate in creating happiness. This finding is inconsistent with the fact that eight out of the ten richest countries in the world are also among the ten happiest nations (Schimmack 2006: 79). Numerous economists are of the opinion that higher income is correlated to increased happiness. This can be explained by the fact that higher income increases individuals' and countries' ability to afford things (Tenaglia 2012: 21). Stutzer (2004: 89-109) argues that for a given income level, having high expectations and aspirations have a negative effect on happiness. The significance of aspirations supports findings that argue that the perceptions of financial status have higher predictive power than actual income (Haller & Hadler 2006: 169-216).

Cross-country findings demonstrated that there is a curvilinear relationship between happiness and economic development. This can be explained by the fact that as income per capita increases, happiness increases suddenly up to a threshold of US \$10 000. Afterwards, the correlation between happiness and further increases in income per capita is very weak (Inglehart 2000: 215-228).

This “threshold” theory argues that beyond a certain level of GDP, income has no influence on happiness. This can be elaborated by the fact that income improves happiness only when basic needs are satisfied. But above a certain level, income is not necessary for happiness (Diener & Chan 2011: 32). Economic growth has been demonstrated to be vital for societies at early stages of development (Inglehart 2000: 215-228). Nevertheless, once people move above a certain threshold, they request better quality of life with such interests as friends, environmental protection and a good family life hence demonstrating the curvilinear relationship between income and happiness (Clark, Frijters & Shields 2008: 95-114).

Research on happiness has been extended to discover how other economic components such as inflation, unemployment and business cycles relate to happiness (Conceicao & Bandura 2008: 11). Standard macroeconomic principle argues that happiness is decreased both by a higher rate of unemployment and by a higher rate of inflation (Di Tella & MacCulloch 2006: 25-46).

Employment status is an economic factor widely discuss in the literature. Self-proclaimed happiness of unemployed people has been demonstrated to be much lower than that of employed persons with similar characteristics (Frey & Stutzer 2010: 5). A person’s working status has been demonstrated to be a significant variable of happiness. A positive affect is produced by the fact of being employed because when people are working they feel healthy both mentally and physically (Tenaglia 2012: 26). Hoorn (2007: 6) argues that unemployment influences happiness through two channels: unemployment produces a direct negative effect on persons who lose their work (maintaining the level of income), and an indirect negative effect on the whole population (augments the risk of losing a job). Clark and Oswald (2002: 1143) demonstrated that an individual’s own unemployment has a smaller psychological impact when the individual is living in a high unemployment region or when that person has been unemployed more often in the past.

Consistent with well-being theory, there is no doubt that people's happiness is reduced by unemployment and inflation (Graham & Chattopadhyay 2012: 2). Apart from financial loss, unemployment is linked to costs such as depression, loss of self-esteem, social stigma and anxiety (Frey & Stutzer 2002). A comparison of the trade-off between inflation and unemployment in terms of happiness has been done. That is the amount of unemployment is equal to a percentage point of higher inflation, or vice versa. Findings revealed that inflation influences happiness less than unemployment, hence the "misery index", which adds up the rate of inflation and unemployment, misrepresents the real situation. A simple linear misery function $W = W(\pi + U)$ does not reflect life satisfaction. Unemployment is demonstrated to have more weight (Di Tella, MacCulloch & Oswald 2001: 335-341).

According to Frey and Stutzer (2002: 10) the inflation rate considerably decreases reported happiness. During the period 1975-91, it has been calculated that an increase in the inflation rate of 12 European countries by five percentage points cut average happiness by 0.05 units of satisfaction. In other words, five per cent of the population were moved downhill from one life satisfaction category to the next lower one, e.g. from being very satisfied to being fairly satisfied (Frey & Stutzer 2010: 95). On this same sample, Di Tella *et al.* (2001: 335-341) demonstrated that employment reduces happiness more than inflation. The balance between unemployment and inflation has been revealed to be 1.66, that is, a percentage point of unemployment generates 1.66 times more unhappiness than a percentage point of inflation.

4.4.2.3 Environmental factors

Rehdanz and Maddison (2005: 111-125) in a study among 67 countries during the period of 1972 and 2000, found that the change in climate has a significant impact on happiness and that happiness might be reduced around the world in the next decades due to global warming. Rehdanz and Maddison (2005 111-125) on the other hand argue that extreme weather has a negative influence on happiness. Moreover, Ferrer-i-Carbonell and Gowdy (2007: 641-659) support that caring about the ozone layer is negatively correlated to happiness whereas caring about species extinction is positively correlated to happiness.

4.4.2.4 Institutional factors

In addition to economic and demographic factors, Altindag and Xu (2011: 1-26) suggest that institutional circumstance concerning the extent and types of democracy have effective and sizeable effects on people's happiness. Based on a survey consisting of 6000 residents of Switzerland, the authors demonstrated that the better established the institutions of direct democracy are in their canton, the happier people are. This is also valid to a second institution, the degree of government decentralisation (Frey & Stutzer 2000: 918).

The kind of political system people live in has been proved to influence their happiness. People living in constitutional democracies have been shown to be happier because politicians in these democracies are more willing to rule according to their interests. Political, economic and personal freedom are highly correlated with happiness (Veenhoven 2000: 257). However, Altindag and Xu (2011: 14) discussed that institutional factors such as democracy, civil rights and corruption are positively correlated to the happiness of individuals who live in rich countries. Graham and Pettinato (2001: 237) found that the choice for democracy and pro-market values is correlated with increased happiness in Latin America and Russia. However, these attitudes have been proven to be held by individuals who have benefited more from these systems.

Frey and Stutzer (2000: 918-938) state that there is a statistically significant relationship between federal decentralisation and subjective well-being. An increase by 2.6% in local autonomy has a greater effect on people's happiness in comparison to a situation in which the communes are less autonomous in their canton.

A positive relationship was found between happiness and the ideological complexion of governments. It has been revealed that there is a positive correlation between happiness and qualitative features of the welfare state such as social democratic welfare state (Radcliff 2001: 932-952).

Organisations everywhere are becoming more and more aware of the power of positive organisational culture (DeAcetis 2012: 1). Organisational culture can be defined as the personality of an organisation. It includes the vision and goals of a firm and has an impact on everything from a brand's visual identity and

communication, to ethical principles and customer service methods, to the hiring procedure and managerial behaviour (Blue paper 2011: 3).

It has been revealed in literature that organisational culture is positively correlated to employees' happiness (Centre for the Study of Living Standards 2011: 6; Blue Papers 2011: 4). The importance of organisational culture for employees' happiness has been demonstrated by the success of companies such as Zappos and Google (Blue papers 2011: 12).

Zappos, an online retailer organisation, provides evidence that a company can focus on happiness to be successful. The business's revenue rose from US \$ 1.6 million in 2000 to US \$ 1.64 billion in 2010. Zappos's CEO, Tony Hsieh argues that it is a brand about happiness, whether to employees, customers or even vendors. Zappos's focus on customer satisfaction and organisational culture has made it both successful and a model for other companies (Baird, Gallegos & Shelton 2012: 1). Zappos is well known for its silly and relaxed atmosphere. Employee antics comprise office parades, nerves ball wars, donut-eating contests and ugly sweater days. The headquarters include an employee nap room, open microphone in the cafeteria, and a wellness centre. Other unusual activities comprise forcing employees to wear a "reply-all" hat when they unintentionally send a company-wide email (Baird, Gallegos & Shelton 2012: 5). Zappos's organisational culture sets it apart from almost every other business. Zappos's unorthodox culture is built on the idea that if you can recruit talented people and employees enjoy their work, brand power and great service will naturally develop (Baird, Gallegos & Shelton 2012: 4).

The Google search engine on the other hand has become so popular that it is now listed as a verb in the dictionary. Started as a university project called the Backrub, Google is now a billion-dollar company; but they have retained the academic vision of creative campus-like corporate environment and incomparable employee benefits and bonuses throughout this remarkable growth (Kuntze & Matulich 2009: 2). Google is a fast paced, high-energy environment. Google employees (named Googlers, in Google's slang) work hard but yet have fun at the same time (Kuntze & Matulich 2009: 2). Google CA headquarter has a college campus-like environment where the virtues of innovation and creativity are praised. Googlers can play foosball, beach volleyball, pool tables, videogames, table tennis and even roller hockey on the

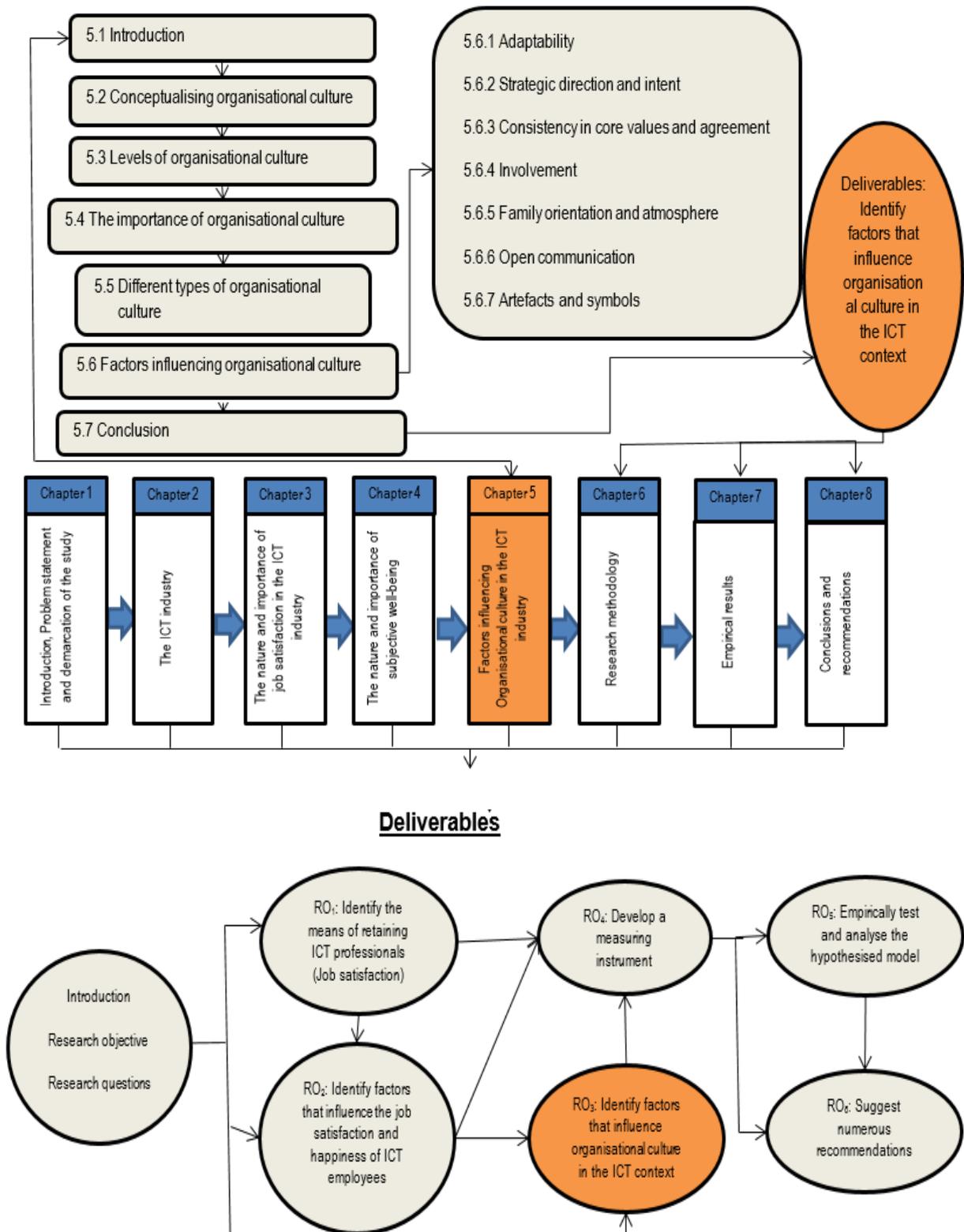
campus which makes employees feel like they are still at a college rather than in an office. Googlers feel proud to be part of the business and they enjoy being a part of the brand (Kuntze & Matulich 2009: 2).

Due to the difficulty of finding items to assess some factors, the complexity to assess them and the time constraints, this study will only focus on the institutional factor; organisational culture. Organisational culture has been chosen because of the success of the biggest ICT companies such as Google which relies on it (Chatterjee 2012). Organisational culture is an abstraction; however, the advantages that are created in social and organisational situations originating from the culture are powerful (Schein 2010: 7).

4.5 SUMMARY

This chapter investigated the concept of subjective well-being also known as happiness. It started by conceptualising the concept of happiness. Numerous definitions of subjective well-being as well as happiness were given. Explanations on the differences of the two concepts were also provided. For the purpose of this study, subjective well-being and happiness were used interchangeably and were defined as the extent to which individuals weigh the overall quality of their life as enjoyable. The following part of the chapter elaborated on the importance of happiness in the society. It was demonstrated that happiness plays a vital role in today's society. Numerous factors were identified as influencing happiness. Among those factors, were internal and external factors. Internal factors comprised personality factors such as personality traits, genetics, goals, adaptation and coping. External factors, on the other hand, incorporated socio-demographic factors, economic factors, institutional factors and environmental factors. For the purpose of this study the focus will be on the institutional factor; organisational culture, hence this will be the theme of the next chapter.

Figure 5.1: Structure and deliverable of Chapter 5



CHAPTER 5

FACTORS INFLUENCING ORGANISATIONAL CULTURE IN THE ICT INDUSTRY

5.1 INTRODUCTION

In the previous chapter the nature and importance of happiness were examined. It has been demonstrated that happiness plays a vital role in every society around the world (Martin, Perles, & Canto 2010: 618). Although various factors have been identified as influencing happiness, this study will focus only on the influence of organisational culture on happiness, and more especially on employees in the ICT industry.

Individuals come from diverse ethnic backgrounds and cultural heritages, have different personalities and have been raised to have a variety of life experiences. When individuals from different backgrounds are brought together in a work environment, these life experiences will appear in a countless variety of ways. A dominant set of norms will however arise over time, guiding the way in which the work is done within a particular business. This occurrence gives rise to the concept of organisational (or corporate) culture (Sadri & Lees 2001: 853).

The aim of this chapter is to identify different factors influencing organisational culture in the ICT context. Hence, this chapter is addressing the third research question (RO₃) and the third research objective (RQ₃).

This chapter will start by conceptualising organisational culture (Section 5.2). In order to understand the concept, different levels of organisational culture will be elaborated on (section 5.3), namely artefacts (Sub-section 5.3.1), espoused values (Sub-section 5.3.2) and tacit assumptions (Sub-section 5.3.3). The importance of organisational culture will then be discussed (Section 5.4). Numerous types of organisational culture will be identified in general (Section 5.5). These types of organisational culture, in general, comprise the clan culture (Sub-section 5.5.1), the hierarchy culture (Sub-section 5.5.2), the adhocracy culture (Sub-section 5.5.3) and the market culture (Sub-section 5.5.4). After the discussion about the types of organisational culture in general, different types of organisational culture in the ICT context will be discussed, with Google as an example of a type of organisational culture (Sub-section 5.5.5). Various factors that could influence organisational

culture will be discussed (Section 5.6). Over 250 factors influencing organisational culture will be identified in the literature. However, for the purpose of this study, the focus will be on 13 factors that could influence organisational culture, namely, adaptability (Creating change, customer focus, organisational learning) (Sub-section 5.6.1), strategic direction and intent (vision, mission, goals and objectives) (Sub-section 5.6.2), consistency in core values and agreement (Sub-section 5.6.3), involvement (empowerment, team orientation, capacity development) (Sub-section 5.6.4), family orientation and atmosphere (Sub-section 5.6.5), open communication (Sub-section 5.6.6) and artefacts and symbols (Sub-section 5.6.7). These factors have been identified as more relevant for ICT employees' organisational culture. Based on a discussion of these factors, a conclusion will be made and a model will be proposed (Section 6).

5.2 CONCEPTUALISING ORGANISATIONAL CULTURE

The concept of organisational culture was first used in the 1970s and 1980s and soon became one of the most dominant but also most debated concepts in management research practice (Jaghargh, Ghorbanpanah, Nabavi, Saboordavoodian & Farvardin 2012: 30). Organisational culture is generally known to be a multidimensional and holistic concept that is historically determined and socially constructed (Jaghargh *et al.* 2012: 30).

Despite its extensive use by policy makers, researchers and practitioners and its intuitive appeal, there is little agreement on the definition of organisational culture. Within the literature, organisational culture is associated with over 250 dimensions. These range from abstract ideas such as satisfaction and warmth, to observable phenomena such as structures and rituals (Jung *et al.* 2009: 1087).

Numerous definitions of organisational culture have been suggested by culture theorists ranging from the ideas of accepted behavioural norms, rules and rituals, to shared beliefs, ideologies and values, as well as shared patterns or understanding (Linnenluecke & Griffiths 2010: 358). A possible explanation for the numerous ways to define organisational culture is because it is influenced by factors such as the business's geographic location, the industry in which the business operates, events that have happened during its history, the personalities of its employees and their ways of interaction (Sadri & Lees 2001: 854).

According to Lewis (2002: 280-287) the concept generally refers to the shared values, beliefs and assumptions present among employees within a business that help guide and organise behaviour. Organisational culture fundamentally emerges from three sources, namely, the values, beliefs and assumptions of the founders of the business; the learning experiences of group members as their business grows; and new values, beliefs and assumptions brought in by leaders and new members (Schein 2010: 14). Sadri and Lees (2001: 854) add that some of the formal definitions of organisational culture involve a cognitive framework comprising values, attitudes, expectations and behavioural norms. In the same manner Smit, Cronje, Brevis, Vrba (2011: 259) for example, define organisational culture as the fundamental beliefs, values and principles that serve as the basis for the business's management system, as well as the management behaviours and practices that both illustrate and reinforce these basic principles.

Schein (2010: 13) describes organisational culture as a number of solutions to problems which have regularly worked and are therefore shown to new members as the right way to think about, perceive and feel in relation to those problems. Kotter and Heskett (1992: 3) define organisational culture as values that are shared by individuals in a group and that tend to continue over time even when group membership changes.

The beliefs and values that are the roots of organisational culture usually mirror what is vital to the business leaders and founders as they are responsible for the purpose and vision of the business, and probably illustrate and reinforce the core values and beliefs through their own behaviour (Jaghargh *et al.* 2012: 30). Organisational culture is also expressed through member behaviour and dialogue as well as by organisational practice and leadership (Jaghargh *et al.* 2012: 30).

According to Robbins (2009: 424), organisational culture can be described as a system of shared meaning held by employees that distinguishes the business from other businesses. This system of shared meaning actually represents a set of key characteristics that the business values. Organisational culture is socially learned and transferred by employees and gives them rules about how to behave in the business. Furthermore, organisational culture can be found in any business of any size, as long as it has a history. It is revealed in observables such as behaviours,

language and things to which are allocated meaning and it is eventually encompasses a configuration of assumptions and deeply buried values that are not easily modifiable (Stoyko 2009: 3; Stok, Markic, Bertoncej & Mesko 2010: 304).

Hartman (2007: 28) utilises the McKinsey definition of organisational culture as the way things are done in the business and believes that organisational culture exists irrespective of whether it is strong, weak, or even acknowledged. Denison (2004:62) supports the view that the foundation of organisational culture was shown to be values and the type of organisational culture developed in a business and depends on the business environment, rituals, rites, heroes and a communication mechanism called the cultural network.

Norburn, Birley, Dunn and Payne (1990: 451-468) add that organisational culture refers to the glue that joins managers together for the effective implementation of business strategies and the lack of this glue will bring about disastrous effects on the business.

In addition, disagreement exists amongst researchers concerning the difference between organisational climate and culture. Most researchers use the term synonymously, while others (Bowditch & Buono 1990; Hutcheson 1996; Clapper 1995) make a distinction between these concepts. Organisational culture is described as the set of expected behaviour patterns that are usually displayed within a business. Organisational climate on the other hand refers to a measure of whether the workers' expectations about working in the business are being accomplished (Schein 1985: 13). Authors that are looking especially at workplace conditions and social threats often used the concept climate rather than culture (Stoyko 2009: 2). Organisational climate can be considered among the visible structures and processes of a business. Organisational climate is better thought of as the result of some of the fundamental rules and is therefore a manifestation of the organisational culture (Schein 2010: 23).

Two typical responses will emerge if a sample of managers is interrogated about the significance of organisational culture. The first response is that organisational culture refers to a unified ideological and social orientation. The manager may talk for example about a business as having a bureaucratic culture or an entrepreneurial culture. The manager refers metaphorically to a business as having general

disposition, attitude or personality. The second typical response is the concept of organisational culture as a climate or a social milieu. This can comprise any aspect of the physical and social context that has an impact on the way individuals feel and think about their workplace. Organisational culture can be seen as general environments that push and pull people in particular directions or lead them to think in certain ways (Stoyko 2009: 2).

Organisational culture, for the purpose of this study, will be defined as a set of shared meaning held by employees that differentiates a business from other businesses (Robbins 2009: 294). In order to have a better understanding of the concept of organisational culture, it is vital to examine its different levels, which will be discussed in the next section.

5.3 LEVELS OF ORGANISATIONAL CULTURE

Organisational culture entails strong shared values that are not easily reformed. This can be explained by Schein's (2004: 26) interpretation of the different levels of organisation culture. The author argues that every organisational culture can be examined at different levels where levels refer to the extent to which a cultural phenomenon is visible to the observer (Stok *et al.* 2010: 304). The danger in trying to understand organisational culture lies in the naive way it is usually defined e.g. culture is the ways things are done around the business; the rites and rituals of the business and so forth. Schein (2004: 26) argues that the way culture should be thought about is by realising that culture exists at three levels, namely artefacts, espoused values and shared tacit assumptions. The three levels are discussed in the following sub-sections.

5.3.1 ARTEFACTS

An artefact is the easiest level to perceive culture. At this level organisational culture is described by what individuals can feel, hear and see as they move across the business. These are the visible organisational processes and structures (Karsters 2011: 18).

Artefacts comprise the visible product of the business such as its language, the architecture of its physical environment, its artistic creations, its technology and products. It also includes the business's style, as exemplified in clothing and

manners of address and emotional displays, its myths and stories told about the business, its published lists of values and its apparent ceremonies and rituals (Schein 2010: 23).

When walking into a business, a person can instantly sense that businesses are exclusive in the way things are done within the business, for example, closed door offices versus open plan office; formal versus informal dress; hushed environment versus employees talking freely with each other. At this level of observation, it is not clear why businesses present themselves and trade with each other in a certain way (The Australian Cooperation Research Centre for Construction Innovation 2001: 14).

5.3.2 ESPOUSED VALUES

At this level, an image of the business is created. Here individuals get to know what the business's values are. These values can be found in the goals, strategies and philosophies which are supported in the business (Karsters 2011: 18). This level helps to better understand why the early observations in the previous level are taking place (The Australian Cooperation Research Centre for Construction Innovation 2001: 14). According to Schein (2010: 24) espoused values include ideals, goals, values, aspirations, ideologies and rationalisations.

5.3.3 SHARED TACIT ASSUMPTIONS

The third level of organisational culture, basic underlying assumptions, usually comprises unconscious, taken for granted values and beliefs, determined perception, behaviour, thought and feeling (Schein 2010: 24). The history of the business plays a big role at this level. If history demonstrates that the way of taking decisions and the way of applying those decisions generated a successful product, these beliefs and values become shared values. They are considered as the tacit assumptions of the nature of the business and how to succeed in it (Karsters 2011: 18). After a clear understanding of organisational culture and its different levels, it is vital to discuss its importance. This importance will be discussed in the following section.

5.4 THE IMPORTANCE OF ORGANISATIONAL CULTURE

The described effects of organisational culture on people's behaviours and attitudes, as well as on overall business performance, are what make the concept an attractive

field of study. It is accepted that organisational culture acts as a system of social control and can have an impact on employees' attitudes and behaviours through the shared values and beliefs operating in a business (Flynn & Chatman 2001: 263-287). Organisational culture has been demonstrated to have a direct influence on employees' satisfaction and commitment (MacIntosh & Alison 2010: 106-117; Johnson & McIntyre 1998: 843-850). Organisational culture holds the business together and inspires employees not only to feel committed to the business but also to perform well. Even though organisational culture is implicit in organisational activities, it has been shown that organisational culture has a positive impact on performance and efficiency (Jaghargh *et al.* 2012: 30).

Organisational culture is generally considered to be one of the most important elements in bringing about modernisation and changing public administration and service delivery (Kloot & Martin 2007: 485-497; Morgan & Ogbonna 2008: 39-65). Similarly Karsters (2011: 17) is of the opinion that organisational culture is vital for maximising the value of human capital and success of organisational change. Organisational culture represents an essential condition for organisational success and culture management must be a critical, management competency (Karsters 2011: 17).

An organisational culture indicates to employees what is worthwhile, what is acceptable and what make sense. These indications are acquired gradually as an individual learns from older employees and gains a sense of involvement in a business (Stoyko 2009: 3). Schein (1999: 14) argues that organisational culture is vital because it is a hidden, influential and often unconscious set of forces that determine both employees' collective and individual ways of observing, thought, patterns and values. Decisions made without consciousness of these operative forces, may result in disagreeable and surprising consequences (Schein 1999: 14).

Organisational culture has been shown to influence the behaviour of employees. Employees of a business can better adapt to their work environment if the features of the business match with their personal orientation (Priem 2010: 21). A large number of researchers (Martins & Coetzee 2007: 20-32; Mehr, Emadi, Cheraghian, Roshani & Behzadi 2012: 1030; Priem 2010: 21; Sempene, Rieger, Roodt 2002: 23-40) have investigated the relationship between organisational culture and job satisfaction. All

these authors found a significant positive relationship between organisational culture and job satisfaction. This means that organisational culture can actually affect an employee's job satisfaction. Sempene *et al.* (2002: 23) support that organisational culture can be used to facilitate the achievement of job satisfaction and organisational goals.

Businesses that are able to maintain a positive organisational culture are likely to experience many benefits. The work environment tends to be more enjoyable when employees identify with the organisational culture, which boosts morale. This leads to improved levels of sharing information, teamwork and openness to new ideas (Sadri & Lees 2001: 856). Additionally, Greger (1999: 10) argues that such organisational culture helps to attract and retain top employees.

Based on the previous discussion, the following list of important features of organisational culture can be given:

- Organisational culture has been demonstrated to have a direct impact on employees' satisfaction and commitment;
- Organisational culture holds the business together and motivates employees not only to perform well but also to feel committed to the business;
- Organisational culture has a positive impact on performance and efficiency;
- Organisational culture is generally considered to be one of the most important elements in bringing about modernisation and changing public administration and service delivery;
- Organisational culture is vital for maximising the value of human capital and success of organisational change;
- Organisational culture indicates to employees what is worthwhile, what is acceptable and what make sense;
- Organisational culture has been shown to influence the behaviour of employees;
- Organisational culture has a positive influence on job satisfaction;
- Businesses that are able to maintain a positive organisational culture are likely to experience many benefits;
- The work environment tends to be more enjoyable when employees identify with the organisational culture, which boosts morale; and

- Positive organisational culture helps to attract and retain top employees.

The above list represents the deliverable of the previous section. After a discussion on the benefits of organisational culture, the following section of this chapter will investigate different types of organisational culture.

5.5 DIFFERENT TYPES OF ORGANISATIONAL CULTURE

In order to better understand the concept of organisational culture and the analysis thereof, researchers have sought to make a distinction between different types of organisational culture (Sadri & Lees 2001: 856). Categorising an organisation's culture can help managers in numerous ways. Firstly, it allows managers to better understand the advantages and disadvantages of that particular type of organisational culture. Secondly, a clear definition of an organisation's culture can assist managers to choose the right person during the recruitment process. Thirdly, knowing the current business position can help managers to make decisions about the progress towards cultural change (Sadri & Lees 2001: 856).

Quinn and Rohrbaugh (1983) created "the model of competing values". This model is named like this because it is based on certain factors that have contradictory values. Businesses need to be flexible and adaptable, but, at the same time they also need stability and control. There is the need for development for proper management of internal information and formal communication, but also for attracting resources and external support. The model emphasises the need to establish appropriate planning and the objectives of the business, but it also emphasises the importance of human resources in the business. Cameron and Quinn (1999) adapted the model of competing values originally created by Quinn and Rohrbaugh (1983) to emphasise the complex nature of organisational culture according to certain dimensions, namely internal and external focus and stable or flexible structure (Karsters 2011: 23). The two dimensions generate four types of organisational culture, namely the clan culture, the hierarchy culture, the adhocracy culture, and the market culture, which will be discussed in the following sections.

5.5.1 THE CLAN CULTURE

The clan culture is internally focused with discretion and flexibility and stresses individuality, shared values and goals, a sense of family and participation. This type of business has strongly shared goals and a sense of cohesion. The internal environment of the business feels more like a family atmosphere than a business atmosphere (Karsters 2011: 23). This type of culture is primarily concerned with human relations. The objective of this organisational culture is to maintain the group in a business. A number of core values such as belonging, trust and participation can be identified in this type of culture. The primary factors of motivation in this clan organisational culture comprise cohesiveness, attachment and membership. On the other hand, a limited number of key issues for the managers has been identified in this type of culture. The managers enable the teamwork of employees through interaction. They also tend to be considerate, participative and supportive to their employees. The benchmark of effectiveness in this culture is to develop commitment and human potential of employees (Priem 2010: 11). This culture is also discussed by other researchers (Denison & Spreitzer 1991: 1-21; Gregory, Harris, Armenakis, & Shook 2009: 673-678) as a human relations model.

5.5.2 THE HIERARCHY CULTURE

The hierarchy culture is internally focused with stability and control and emphasises clear lines of authority, regulations and rules, uniformity, order and efficiency. This type of business often relies on policies, procedures and formal structures to manage the business (Karsters 2011: 23). It focuses on internal organisation and stability. The motivating factors for this type of culture are security, rules, orders and regulations. Numerous researchers (Denison & Spreitzer 1991: 1-21; Gregory *et al.* 2009: 673-678) refer to this type of culture as an internal process model.

5.5.3 THE ADHOCRACY CULTURE

The adhocracy culture is externally focused with flexibility and discretion and underlines values such as adaptability, creativity, dynamism, and entrepreneurship. The focus is on being open to the external environment and change is vital in these types of businesses in which innovation can succeed (Karsters 2011: 23). Growth and creativity are the main motivating factors in this type of culture. The managers in

this business's culture tend to be idealistic and entrepreneurial. They are willing to take risks and are able to cultivate a vision with a view to the future and with creativity as a central feature of their employees. In this case the business hopes to obtain new resources. This culture is also known as the open systems model (Denison & Spreitzer 1991: 1-21; Gregory *et al.* 2009: 673-678).

5.5.4 THE MARKET CULTURE

The market culture is externally focused with stability and control and highlights production and goal accomplishment, competitiveness, environmental interaction and customer orientation (Karsters 2011: 24). The managers in this type of organisational culture tend to be targeting, directive and functional. They encourage the productivity of employees and provide the structure of the business (Denison & Spreitzer 1991: 1-21). Gregory *et al.* (2009: 673-678) refer to this type of culture as the rational goal model. After this discussion of the types of organisational culture in general, the next section will focus on the types of organisational culture in the ICT industry.

5.5.5 DIFFERENT TYPES OF ORGANISATIONAL CULTURE IN THE ICT INDUSTRY

Limited research or discussion about different ICT organisational cultures is found in the literature. One of the limited discussions of the different ICT organisational cultures is given by *The Australian Cooperative Research Centre for Construction and Innovation* (2001: 21). They identified five ICT cultures, namely revered ICT culture (dragon on a pile of gold), the controlled ICT culture (caged dragon), the demystified ICT culture (Pet dragon), the Integrated ICT culture (team dragons) and the fearful ICT culture (dead dragon). These five ICT cultures are illustrated in Table 5.1 below.

Table 5.1: Five ICT cultures

TYPE OF CULTURE	DESCRIPTION	MANAGERIAL IMPLICATIONS
Revered ICT culture (Dragon on a pile of gold)	<ul style="list-style-type: none"> • ICT has a significant positive impact on business. • Honours those responsible for introducing ICT (does not criticise technology). • Innovation and championship behaviours are encouraged to support continual improvement through creative, effective use of ICT. • ICT knowledge, skills and resources belong in the hands of those who understand it. • Able to overcome gender bias (technology skills is the key to prosperity and promotion). 	<ul style="list-style-type: none"> • ICT innovations experience little resistance. • Early ICT adopters gain competitive advantage by applying it to their business needs. • Business becomes compliant with its ICT 'superiority'-getting blindsided in a crisis (not support emerging business needs). • Conflict between those who understand ICT and requirements for its successful implementation and those who make the decisions. • ICT 'wizards' (ICT specialist) often disregard user dissatisfaction and frustration.

Table 5.1: Five ICT cultures (continued)

<p>Controlled ICT culture (Caged dragon)</p>	<ul style="list-style-type: none"> • Neither 'dragon' (ICT) nor 'wizard' (ICT specialist) are trusted enough to take decisions alone and their abilities are to be guarded and controlled. • Senior management (centralised) control ICT with minimal interaction with lower level end users. • ICT specialists are deprived (caged) members of the organisation; they are minimally involved in strategic directions as they are perceived by senior management as not having the necessary business knowledge to understand strategic application of ICT, therefore ICT personnel receive and control few resources. • ICT is perceived as a 'necessary evil'. 	<ul style="list-style-type: none"> • Controlled ICT culture allows better integration of ICT and business strategies. • Controlled ICT culture intensified competition resources between management and ICT specialists – 'whoever yells the loudest wins'. • Lack of senior management ICT knowledge and skill affects innovative decision making. ICT allowed limited opportunities to influence strategic planning. • This type of culture fails to develop adequate ICT skills. • Senior management (usually older) tend to smother the (perceived threatening) ICT creativity of younger managers.
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Table 5.1: Five ICT cultures (continued)

<p>Controlled ICT culture (Caged dragon)</p>	<ul style="list-style-type: none"> • Neither ‘dragon’ (ICT) nor ‘wizard’ (ICT specialist) are trusted enough to take decisions alone and their abilities are to be guarded and controlled. • Senior management (centralised) control ICT with minimal interaction with lower level end users. • ICT specialists are deprived (caged) members of the organisation; they are minimally involved in strategic directions as they are perceived by senior management as not having the necessary business knowledge to understand strategic application of ICT, therefore ICT personnel receive and control few resources. • ICT is perceived as a ‘necessary evil’. 	<ul style="list-style-type: none"> • Controlled ICT culture allows better integration of ICT and business strategies. • Controlled ICT culture intensified competition resources between management and ICT specialists – ‘whoever yells the loudest wins’. • Lack of senior management ICT knowledge and skill affects innovative decision making. ICT allowed limited opportunities to influence strategic planning. • This type of culture fails to develop adequate ICT skills. • Senior management (usually older) tend to smother the (perceived threatening) ICT creativity of younger managers.
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Table 5.1: Five ICT cultures (continued)

<p>Demystified ICT culture (Pet dragon)</p>	<ul style="list-style-type: none"> • Inexperienced ICT specialists are unaware or unappreciative and only partially in control of ICT capabilities or opportunities. • Realising their own future employment depends on it, ICT business employees are more aware of what ICT has to offer and develop/implement themselves accordingly without accessing ICT resources ('self-proclaimed wizards'). 	<ul style="list-style-type: none"> • ICT identification and application opportunities (and risks) are realised through the recruitment of employees that claim to be wizards but they are not at all and users. • This type of culture discouraged reliance on ICT specialists. • Users solve their own ICT problems. • There is tension between fragmented/duplicated ICT efforts of users and ICT management
<p>Integrated ICT culture (Team Dragons)</p>	<ul style="list-style-type: none"> • ICT, the specialists and users place equal value on each other's skills and capabilities (independently competent yet reliant on each other), creating a positive and creative experience of ICT shared by all. • Business goals and client needs drive ICT innovation. • This type of culture is not widely supported. 	<ul style="list-style-type: none"> • Due to ICT users and specialists willingly working together, ICT solutions to business problems can be positively achieved. • Teams do not necessarily function well simply because they were formed. For example an innovative ICT is developed by specialists but poorly implemented by management and potential end-users. • It is hard to sustain the commitment that is required to make ICT

		<p>implement successfully.</p> <ul style="list-style-type: none"> • Hidden agendas and problem solving rituals will cause the teamwork concept to fail.
<p>Fearful ICT culture (Dead dragon)</p>	<ul style="list-style-type: none"> • This type of culture relies on manual information processing (even if ICT is available and proven capable). • Fearful ICT culture resists ICT (automation) based on various rationales namely the inability to replace human intuition; the inaccuracy of tool/ system processing; the difficulty to correct tool / system errors; mistrust of developers; Fear lack of knowledge, experience and skills; and introduce unnecessary risk. 	<ul style="list-style-type: none"> • ICT mistrust may emphasise a greater concern for people, placing an innovative ICT under close scrutiny. • Work tends to continue manually until all ICT flaws are detected, corrected and potential benefits were realised by all. • The transition from manual to automate is gradual and 'as easy as possible for employees. • Employees invest significant resources in training. • Continued fear of an implemented ICT system limits further innovation and leads to underutilisation.

Source: The Australian Cooperative Research Centre for Construction Innovation 2001: 21.

A comparison between the types of organisational culture in general and the different types of organisational culture in the ICT industry will be made in this study. The revered ICT culture can be compared to the adhocracy culture. They both stress values such as adaptability, creativity, dynamism and innovation. In the ICT context, championship and innovation behaviours are stimulated to support continual

improvement through creative, effective use of ICT. The controlled ICT culture can be compared to the hierarchy culture. The emphasis here is on clear lines of authority. Employees here are controlled. This type of culture relies on policies, procedures and formal structures. In the ICT context, senior management monitor ICT with minimal interaction with lower level employees.

The demystified culture can be matched to the market culture. Employees here are aware of the benefits of ICT and develop themselves accordingly. The focus is on the productivity of employees. The integrated ICT culture can be compared to the clan culture. They both stress individuality and a family atmosphere in the business. This type of culture is concerned with human relations; ICT specialists and users place equal value on their capabilities and skills creating a positive experience of ICT shared by all. It was difficult to compare the fearful ICT culture as it just describes the non-adoption of ICT in businesses. When considering organisational culture, it is vital to consider actual companies that have shown the positive effects that a type organisational culture can have (Sadri & Lees 2001: 856). An example of a company that has shown the positive effect of organisational culture will be discussed in the following paragraph.

Google for example has been ranked number one in the magazine Fortune's latest annual list of the 100 best companies to work for (Chatterjee 2012). The Internet search engine Google, employs 18 500 individuals in the United States, and is one of the top employers worldwide because of its type of organisational culture (Chatterjee 2012). The motive that makes Google such a great place to work for is the fact that Google believes that treating employees well is more important than making a lot of money (Chatterjee 2012). Google's innovative and creative organisational culture assists its employees to work hard and play hard. Its on-site bonuses comprise valet parking, bike repair, dental and medical facilities, oil change, free washers and dryers, free breakfast, lunch and dinner on a daily basis (Chatterjee 2012). According to Johansson (2012), Google claims some unique cultural aspects such as massage chairs, lava lamps, and dogs; double rooms with three or four team members; assorted video games, pianos, foosball, darts, ping pong table, gyms that include dance and yoga classes; social groups of all varieties such as film clubs, meditation classes, salsa dance clubs and a wine tasting group.

In their weekly meeting, employees, also called Googlers, ask questions directly to Larry (founder), Sergey (co-founder) and other management executives about any problems faced in the company (Google 2013). Google offers special benefits to its employees such as opportunities to learn, grow, travel and have fun during workdays (Chatterjee 2012). Based on the previous discussion, it can be concluded that there is a mix of the clan culture (integrated ICT) and the adhocracy culture (reversed ICT culture) at Google. They focus on human relations and cultivate a family atmosphere in their offices, they also stress values such as adaptability, dynamism, creativity and innovation.

The previous discussions identified several types of organisational culture in general and in the ICT industry particularly. The question that comes to mind is how can organisational culture be measured? This will be the focus of the next section of this chapter.

5.6 FACTORS INFLUENCING ORGANISATIONAL CULTURE

Numerous approaches to the assessment of organisational culture have been developed throughout the years, each suggesting a method for studying organisational culture by assessing behavioural norms and values (e.g. Karsters 2011; Denison, Janovics, Young & Cho 2006; Cameron & Quinn 1999, 2006).

Various researchers (Bellot 2011; Jung *et al.* 2009: 3; Mannion, Davies, Konteh, Jung, Scott, Bower, Whalley, McNally & McMurray 2008: 31) argue that multiple methods like quantitative and qualitative methods could be used to assess organisational culture. Three main approaches are used by researchers to study organisational culture, namely holistic studies through participant observation, metaphorical or language studies and quantitative studies (Karsters 2011: 20).

Holistic studies treat organisational culture as an independent variable. They support that organisational culture can be influenced by the managers of the business (Karsters 2011: 20). Researchers using the holistic approach (e.g. Singh, Darwish, Costa & Anderson 2012: 651-667; Brocke & Sinnl 2011) suggest that managers manipulate business's stories, mission, ceremonies, myths and ideologies in order to strengthen organisational effectiveness and manage organisational culture. Metaphorical studies on the other hand (e.g. Schein 2010; Jaghargh *et al.* 2012)

treat organisational culture as a dependent variable where it is stated that organisational culture has arisen from the overall societal culture and that it is the result of various historical events and activities of the business that are not manipulated by management. Finally quantitative studies, which rely mainly on survey research methodology and statistical data analysis, identify numerous dimensions of organisational culture and organisational culture is treated as a dependent variable (Karsters 2011: 21).

As the assessment of organisational culture evolved and quantitative methods became more popular and accepted, numerous surveys and questionnaires were developed to measure the dimensions of organisational culture. It is important to note that some of these questionnaires were designed in order to be sold to managers and therefore are not subject to academic development by researchers (Bellot 2011: 12). It is acknowledged that there is no ideal tool to assess organisational culture as each instrument has limitations for use and scope (Bellot 2011: 12).

Primary among the models and scales to assess organisational culture are the Organisational Culture Inventory (Cooke & Rousseau 1988), the Multidimensional Model of Organisational Cultures (Hofstede 1980), the Values in organisational Culture Scale (Zheng 1990), the Organisational Culture Assessment Instrument (Cameron & Quinn 1999, 2006), the Denison Model of Organisational Culture (Denison 1990; Denison & Mishra 1995; Denison & Neale 1996, Denison *et al.* 2006), and so forth. In their review of the literature on the instruments for exploring organisational culture, Jung *et al.* (2009: 1089) identified 70 instruments for exploring and assessing organisational culture. Psychometric information could be found for 48 of these instruments. However there is ambiguity in the listing of these instruments due to the fact that similar instruments may be named differently or different instruments may have similar names.

Jung *et al.* (2009: 53- 63) identified over 250 factors influencing organisational culture. However, for the purpose of this study, the focus will be on 13 factors that could influence organisational culture namely:

- Adaptability (Creating change, customer focus, organisational learning);
- Consistency with core values and agreement;

- Strategic direction and intent (vision, mission, goals and objectives);
- Involvement (empowerment, team orientation, capacity development);
- Family orientation;
- open communication; and
- Artefacts and symbols. These factors have been demonstrated to be more relevant for the ICT industry and will be discussed in the following paragraph.

5.6.1 ADAPTABILITY

Adaptability can be described as the business's capacity for internal change in reaction to external conditions (Denison 2004: 65). Adaptability refers to the fact that a business should develop beliefs and norms that support its capacity to receive and analyse signals from its environment and translate these into structural, cognitive and behavioural changes (Denison & Mishra 1995: 215). Adaptability supports the idea that a business struggles to continually balance external events and motivation for change and internal identity (Denison 2004: 65). Denison and Mishra (1995: 204) are of the opinion that adaptability is an indicator of openness, flexibility and responsiveness, and is a strong predictor of growth. Daft (2009: 382) demonstrated that a good illustration of adaptability is Google, a business whose values encourage individual initiative, risk-taking, experimentation and entrepreneurship. In his study, Denison (2004: 65) argues that adaptability could be assessed by three sub-dimensions, namely, creating change, customer focus and organisational learning (Denison 2004: 65).

5.6.1.1 Creating change

Creating change refers to the fact that the business is able to read its environment, react rapidly to current change and anticipates future changes (Denison *et al.* 2006: 8). The business is also able to create adaptive change (Denison *et al.* 2006: 8). Dada (2012) argues that successful businesses should be able to advance at the speed of change. Amabile and Kramer (2012) are of the opinion that individuals are more creative when they have positive emotions; therefore when they are happy.

5.6.1.2 Customer focus

Another dimension of adaptability is customer focus and refers to the fact that the business knows and reacts to customers, as well as anticipates their future needs (Denison *et al.* 2006: 8). It shows the extent to which the business is willing to satisfy the customer (Denison *et al.* 2006: 8). In today's competitive business environment, customer satisfaction is a significant component of an effective business (Gillespie, Denison, Haaland, Smerek & Neale 2007: 2). Google, for example, maintains their employees' happiness by providing users with the best products and services they can. At Google, when an employee feels a user is not served well, the employee should bring it to the attention of the company (Google 2013).

5.6.1.3 Organisational learning

Organisational learning, the third dimension of adaptability, describes the fact that the business receives, understands and converts signals from the environment into opportunities (Denison *et al.* 2006: 8). These opportunities will then be used for inspiring innovation, developing capabilities and gaining knowledge (Denison *et al.* 2006: 8). Businesses often expect that knowledge creation and learning will take place continuously for individuals and that they will share their knowledge in ways that encourage learning in the group and throughout the business (Marsick & Watkins 2003: 132). Marsick and Watkins (2003: 135) argue that environmental shocks or surprises such as a new competitor entering the market, new technology, a new regulation, market downturns, a new vision, a new demand, customer dissatisfaction or some other changes of the status quo generate organisational learning.

Two main perspectives have been identified in the development of organisational learning scales. The first perspective looks for the existence of learning enablers in the business, while the second perspective looks for the outcomes of learning in the business (Jyothibabu *et al.* 2010: 304). Romano (2013) argues that managers can stimulate employees' happiness by creating a learning environment. Managers should promote a culture in which employees can solve problems, learn, challenge one another's perspective, and develop their present knowledge, attitudes and skills. Moreover, Metz (2013) supports that employees' happiness can be increased by giving them the opportunity to learn and develop their skills. In the following section,

the factor, strategic direction and intent, will be discussed as well as its sub-dimensions.

5.6.2 STRATEGIC DIRECTION AND INTENT

Strategic direction entails that there is clear strategy that gives purpose, meaning and direction to a business (Denison *et al.* 2006: 8). Marsick and Watkins (2003: 135) support that the success of a business's strategy is due in part to the business's ability to act cohesively. This involves a shared meaning among employees about intentions, alignment of vision about what to do and the ability to work together across many different kinds of boundaries. Strategic direction and intent is composed of four sub-dimensions namely vision, mission, goals and objectives (Tait & Venter 2011: 129). These sub-dimensions will be grouped into three sub-sections, namely, vision, mission, and goals and objectives and will be discussed in the following sections.

5.6.2.1 Vision

Vision refers to the fact that there is a future destination for the firm and describes the kind of business it is aiming to become (Tait & Venter 2011: 130). It comprises core values and captures the minds and hearts of the employees, while providing direction and guidance (Denison *et al.* 2006: 9). Slyck (2013) in her report argues that in order to increase employees' happiness in businesses, the top management people should consistently and effectively communicate the big picture, the vision for the business.

5.6.2.2 Mission

Mission expresses the business's goals, vision for the future and an established sense of purpose (Denison 2004: 65). According to Tait and Venter (2011: 130), mission is a statement of important values that describes the main purpose of the business and possibly its distinctive competitiveness. Effective businesses pursue a mission that delivers meaning and direction to employees (Denison *et al.* 2006: 8). The importance of mission to organisational culture was highlighted by the observation that the most critical crises in businesses usually happened when the basic mission was questioned (Denison & Mishra 1995: 216). At Google for example, even though they speak dozens of languages which reflect the global audience that

they serve, employees' happiness is maintained through the fact that employees share common goals and vision for the business (Chatterjee 2012).

5.6.2.3 Goals and Objectives

Goals and objectives refer to the fact that top managers are ambitious but yet set realistic goals that are understood and measured (Denison *et al.* 2006: 8). Chaiprasit and Santidhirakul (2011: 190) support that organisational goals and efficiency lead to good attitudes towards the business and happiness at work. Fisher (2010: 30) is also of the opinion that the rate of progress toward a goal influences an employee's happiness.

5.6.3 CONSISTENCY IN CORE VALUES AND AGREEMENT

Consistency describes the level of cohesion, combination and agreement around norms and values (Kotrba *et al.* 2011: 5). Consistent behaviours are engrained in a set of core values, people are able to reach agreement, and consistent business activities are well integrated and coordinated (Kotrba *et al.* 2011: 5). Denison and Mishra (1995: 204) argue that consistency, just as the business's mission, is an indicator of vision, direction and integration, and is a better predictor of profitability than involvement and adaptability. Denison (2004: 65) refers to consistency as the combined approach to problem resolution and goal achievement that can deliver internal quality essential to deal with outside unexpected situations and challenges. The positive impact of consistency is that it offers coordination and integration to businesses. The negative aspect of consistency on the other hand is that highly consistent cultures are usually the most resistant to adaptation and change (Denison & Mishra 1995: 215). Consistency is assessed through core values and agreement.

Core values and agreement describe the fact that employees of a business share traditional values that produce a strong sense of identity and a clear set of expectations as well as the fact that business is able to reach agreement on critical issues (Denison *et al.* 2006: 7). This comprises the fundamental level of agreement and the aptitude to reconcile differences when they occur (Denison *et al.* 2006: 7). Tsai (2011: 1) argues that understanding the business's core values avoids possible internal conflict and hence leads to employees' happiness.

5.6.4 INVOLVEMENT

Involvement refers to having a teamwork orientation and empowerment of employees in the business, which are necessary to address the competitive business environment (Kotrba *et al* 2011: 4). Fisher (2010: 13) describes involvement as the extent of engagement with an employee's job, identifying with an employee's work, and viewing the job as central to an employee's self-esteem and identity. According to Denison and Mishra (1995: 204) involvement, as is the case with adaptability, is an indicator of openness, flexibility and responsiveness, and represents a strong predictor of growth. At Google for example, employees' happiness relies on the fact that managers ensure that every employee has great opportunities, and that they are having a meaningful influence and participation in the business (Chatterjee 2012). Denison, Haaland and Goelzer (2004: 101) argue that involvement includes three sub-dimensions, namely empowerment, having a team orientation and capability development.

5.6.4.1 Empowerment

Empowerment describes the situation where people have the initiative, authority and ability to manage their own work. This generates a sense of responsibility and ownership towards the business (Denison *et al.* 2006: 6). Menon (2001: 155) suggests that academic literature on empowerment can be grouped into three broad categories, namely the structural approach, the motivational approach and the leadership approach.

In the structural approach, empowerment is described as granting authority and decision-making. Empowering employees will then include moving decision-making authority down the business hierarchy and giving employees the ability to significantly influence business outcomes (Menon 2001: 155). In the motivational approach, empowerment is defined as a process of increasing feelings of self-efficacy among employees through the identification of circumstances that promote powerlessness. These circumstances are then removed by both informal techniques of offering efficacy information and formal organisational practices (Menon 2001: 156). Finally in the leadership approach, the focus is also on the energising aspect of empowerment. Leaders inspire and empower their followers to act by offering an

exciting vision for the future. They stimulate followers to participate in the process of changing the business (Menon 2001: 156).

Metz (2013) is of the opinion that empowering employees helps to boost their happiness. The author stated that it is vital to get employees' input and make them feel as if they are participating in the business's progress. According to Awamleh (2013: 315), empowerment encourages employees' control of their own jobs, their autonomy, and develops their abilities and skills to benefit both their businesses and themselves. The author also argues that empowerment increases happiness among employees at the workplace.

5.6.4.2 Team orientation

Businesses have more recently encompassed an increasingly team-oriented work environment, and teamwork has been identified as a critical component underlying effective team performance (Driskell, Salas and Hughes 2010: 324). Team orientation describes a scenario where value is placed on working compliantly towards common goals to which all employees feel reciprocally responsible. The business is based on team effort to get work done (Denison *et al.* 2006: 6). Salas, Cooke and Rosen (2008: 541) state that to promote teamwork, it is important to have team members with a collective orientation that will ease communication and coordination and consequently increase team performance. McCarthy, Almeida and Ahrens (2011: 5) in their study about understanding employee well-being practices in Australian organisations demonstrated that team orientation is positively correlated to employees' happiness. Similarly, Graham and Shier (2010: 1564) demonstrated the importance of working as a team and its impact on employees' happiness.

5.6.4.3 Capacity development

Capacity development describes the situation where the business constantly invests in the development of employees' skills in order to remain competitive and meet current business needs (Denison *et al.* 2006: 6). Employees' happiness at Google for example is maintained by the special and unique perks that comprise opportunities to learn, grow, travel, and have fun during the workdays. Furthermore, the Global Education Leave Program at Google allows employees to take leave to

pursue further education for up to five years and US \$ 150 000 in reimbursement (Chatterjee 2012).

5.6.5 FAMILY ORIENTATION AND ATMOSPHERE

The concept of family orientation originated with women going back to work after giving birth, but focusing on maintaining the balance between work and family (Bradley *et al.* 2010: 3). Thompson, Beauvais and Lyness (1999: 394) define a work-family culture as a business which supports and values the integration of employees' family and work lives. The relationship between work and family conflict has become popular and the concept is also known as work-life or work-non-work balances (Bradley *et al.* 2010: 3).

Family orientation and atmosphere describe an organisational culture where the business is people-oriented and views each worker as a person rather than as an employee (Tang *et al.* 2000: 538). Dual income parents struggle to balance their family and work responsibilities. Therefore, many businesses started to feature family-friendly related practices, such as provision of a child care facility for employees with babies or school age children (Wong & Ko 2009: 196). Wong and Ko (2009: 195) stress that a work-family culture comprises benefits such as compassionate leave, having a holiday house, leave for getting married, office parties and training courses for personal development. Many benefits are designed to be family-friendly to balance employees' family needs due to their unpredictable nature (Wong & Ko 2009: 195).

At Google, some of the perks that keep employees happy include medical and dental facilities, oil changes and bike repairs. Additionally, Google offers unlimited sick leave and a US \$500 take-out meal fund for new parents (Chatterjee 2012). Employees at Google are encouraged to bring their dogs to work, and do their laundry on-site (Daft 2009: 382). Googlers argue that the business helps them to make more time for activities outside work, especially family, which helps them to be happier at work (Google 2013). According to Chairprasit and Santidhirakul (2011: 198), a good work environment brings both mental and physical health. Benefits and comforts make employees satisfied and generate a good attitude towards work, which in turn reduces problems. A good quality of work-family balance thus increases happiness at work.

5.6.6 OPEN COMMUNICATION

Open communication concerns a simulation/scenario where there is a consensual decision-making process. The manager will not take a decision until others who will be affected have had adequate time to provide their opinions, feel their opinion is taken into consideration, and are willing to support the decision even though they may not agree with it (Tang *et al.* 2000: 540). Baptiste (2008: 289) refers to open communication as ensuring that employees are informed about organisational problems and which conveys a substantive and symbolic message that they are to be reliable in a positive and open manner.

Chairpravit and Santidhirakul (2011: 198) stress that good relationship at work results in good communication, unity, and altruism among employees, all of which lead to happiness at work. Therefore, according to these authors, supervisors should create a friendly work environment and encourage sharing of opinions. Chairpravit and Santidhirakul (2011: 198) argue that the important things are informing employees about their performance, open communication, listening to their opinions and giving advice. Stimulating happiness at work for employees means giving support, creating motivation, generating desire to work regularly, and encouraging two-way transparent communication (Chairpravit & Santidhirakul 2011: 198). At Google for example, employees have the opportunity to ask the founders about any business issues and their vision for the future of the business in their weekly meetings (Chatterjee 2012).

5.6.7 ARTEFACTS AND SYMBOLS

As described earlier, artefact is the easiest level at which to observe organisational culture. Artefacts refer to what an individual can feel, hear and see when walking into a business (Schein 2010: 23). For example, when entering into a business, an individual can immediately sense the business is unique in the way things are done within the business. This comprises formal and informal dress codes, employees talking freely with each other, a quiet environment, open plan and closed door offices (The Australian Cooperative Research Centre for Construction Innovation 2001: 14). Further explanation of artefacts can be found previously in the Section 5.3.1.

Charterjee (2012) demonstrated that at Google, employees' happiness relies mostly on the artefacts of the business. Google bonuses include valet parking, bike repair, free breakfast, lunch and dinner on a daily basis. Additionally, Johansson (2012) showed that Google offers some unique perks such as massage chairs, assorted video games, pianos, foosball, darts, Ping-Pong table, gyms that comprise dance and yoga classes; social groups of all kinds such as meditation classes, film club, salsa dance clubs and a wine tasting groups. After this discussion on the different factors influencing organisational culture, the following section will be a conclusion of this chapter based on the previous arguments.

6 CONCLUSION

This chapter investigated the concept of organisational culture also known as corporate culture. It started by conceptualising the concept. Organisational culture was differentiated from organisational climate and many definitions of organisational culture were given. For the purpose of this study organisational culture was defined as a system of shared means held by employees that differentiates a business from other businesses. Different levels of organisational culture were discussed. These levels comprise artefacts, espoused values and shared tacit assumptions. The importance of organisational culture was then discussed. It has been demonstrated that business that have positive culture are likely to experience many benefits. Numerous types of organisational culture were identified in general and in the ICT context particularly. A comparison between the different types of organisational culture in general and the type of organisation cultures in the ICT industry was made. Google was then discussed as an example of business with a positive type of organisational culture. It was concluded that Google's organisational culture is a mix of adhocracy culture and clan culture.

After a clear understanding of organisational culture, its different levels, its importance and its different types, various factors influencing organisational culture were discussed. Over 250 factors were identified in the literature but for the purpose of this study, the focus was on 13 factors that have been chosen based on their relevance to ICT employees. These factors involve adaptability (Creating change, customer focus, organisational learning), consistency with core values and agreement, strategic direction and intent (vision, mission, goals and objectives),

involvement (empowerment, team orientation, capacity development), family orientation, open communication and artefacts and symbols. Based on the literature review, a model testing the relationship between the variables identified can be proposed which represents the deliverable of this chapter. This model can be elaborated in Figure 5.2. In order to test the relationship in the model, a specific method should be used hence the focus of the next chapter: Methodology.

Figure 5.2: Theoretical model: The influence of organisational culture on the happiness of employees in the ICT industry

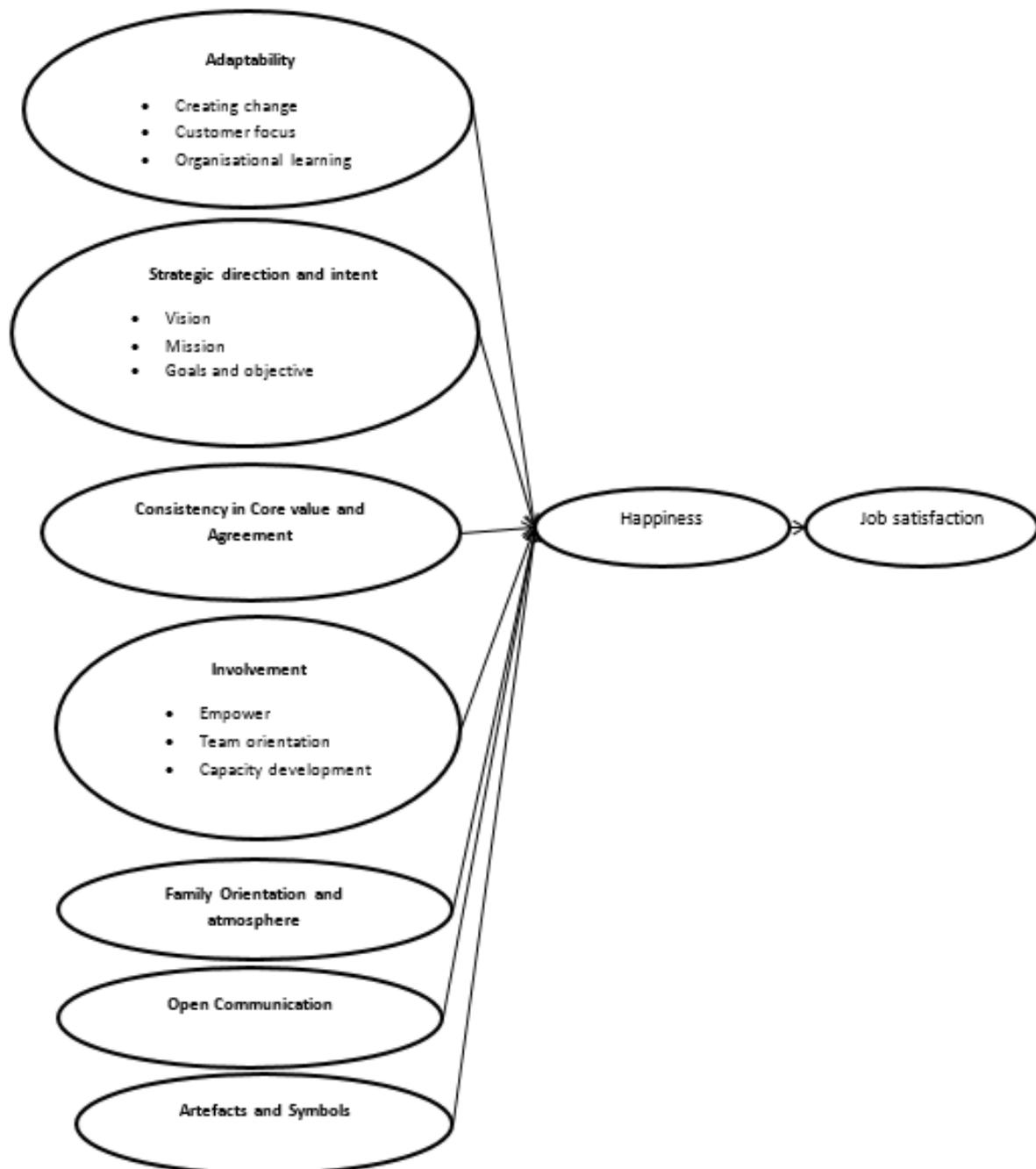
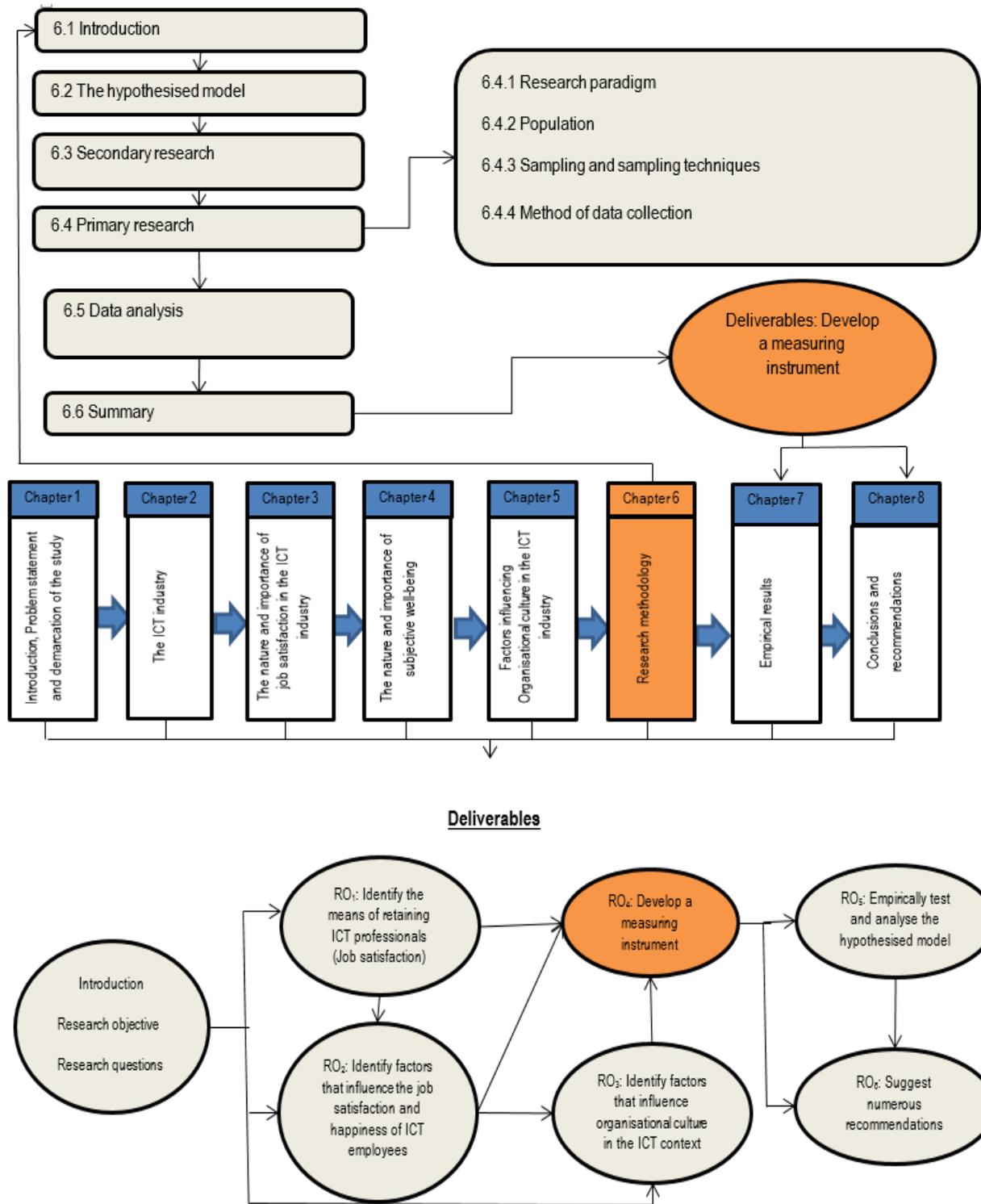


Figure 6.1: Structure and deliverable of Chapter 6



CHAPTER 6

RESEARCH METHODOLOGY

6.1 INTRODUCTION

The literature review conducted in chapters 2, 3, 4 and 5 discussed the importance of the ICT industry, identified its problems as well as numerous factors influencing the job satisfaction of employees in the ICT industry. Various components that influence happiness were also identified. Due to the complexity of measuring some factors and the time constraint, the focus of the study is on the influence of organisational culture on happiness. In order to achieve the primary objective of this study, namely, to explore and empirically test the influence of numerous independent variables (*Involvement, Adaptability, Consistency, Strategic direction and intent, Open communication, Family orientation and Artefacts and symbols*) on the mediating variable *Happiness* and the influence of *Happiness* on the *Job Satisfaction* of employees in the ICT industry, an empirical investigation was undertaken.

The aim of this chapter is to describe the research methodology used to address the primary objective of this study and to develop the measuring instrument that will be used to assess the relationships between the independent variables and the mediating variable *Happiness*, as well as the mediating variable *Happiness* and the dependent variable *Job satisfaction*. This chapter is therefore addressing the fourth research question (RQ₄) and objective (RO₄).

This chapter will start by listing the various hypotheses to be tested in this study. Based on these hypotheses, a model will be suggested (Section 6.2). The secondary research (Section 6.3) as well as the primary research (Section 6.4) approaches to be used in this study will then be identified and discussed. The primary research will include the research paradigm (Sub-section 6.4.1), the population (Sub-section 6.4.2), the sampling and sampling techniques (Sub-section 6.4.3) method of data collection (Sub-section 6.4.4), as well as the data collection (Sub-section 6.4.5). The following part of this chapter (Section 6.5) will elaborate on the various procedures of data analysis. Methods to assess the reliability and validity of the measuring instrument will be identified (Sub-section 6.5.1) followed by a discussion on different descriptive statistics (Sub-section 6.5.2). The subsequent section will describe the

method used to establish whether or not there is a relationship between the variables under investigation (Sub-section 6.5.3). A description of the multiple regression analyses will follow (Sub-section 6.5.6) as well as a discussion on the ANOVA test that will be used to test the relationship between the demographic variables and the variables under investigation. Lastly (Section 6.6) a summary of the chapter will be given.

6.2 THE HYPOTHESISED MODEL

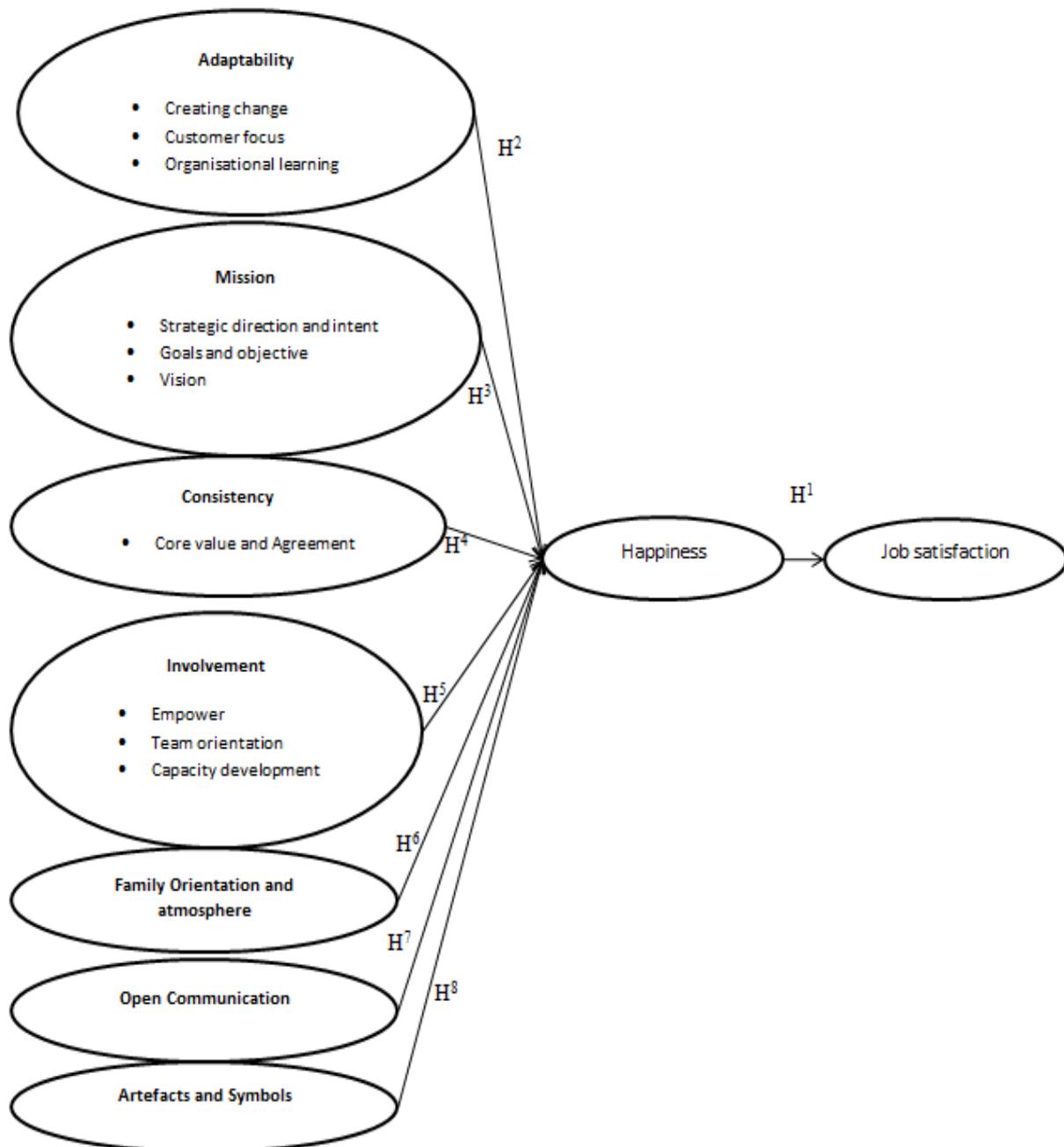
Based on the discussion elaborated in the chapters on literature and due to the fact that this study is focusing on the influence of organisational culture on employees' happiness in the ICT industry, the following hypotheses can be formulated:

- H²: There is a positive relationship between *Adaptability (Creating change, Customer focus and Organisational learning)* and the *Happiness* of ICT employees.
- H^{2a}: There is a positive relationship between *Creating change* and the *Happiness* of ICT employees.
- H^{2b}: There is a positive relationship between *Customer focus* and the *Happiness* of ICT employees.
- H^{2c}: There is a positive relationship between *Organisational learning* and the *Happiness* of ICT employees.
- H³: There is a positive relationship between *Strategic direction and intent (Vision, Mission, Goals and Objective)* and the *Happiness* of ICT employees.
- H^{3a}: There is a positive relationship between *Vision* and the *Happiness* of ICT employees.
- H^{3b}: There is a positive relationship between *Mission* and the *Happiness* of ICT employees.
- H^{3c}: There is a positive relationship between *Goals and Objective* and the *Happiness* of ICT employees.

- H⁴: There is a positive relationship between *Consistency in Core value and Agreement* and the *Happiness* of ICT employees.
- H⁵: There is a positive relationship between *Involvement (Empowerment, Team Orientation, Capacity development)* and the *Happiness* of ICT employees.
- H^{5a}: There is a positive relationship between *Empowerment* and the *Happiness* of ICT employees.
- H^{5b}: There is a positive relationship between *Team Orientation* and the *Happiness* of ICT employees.
- H^{5c}: There is a positive relationship between *Capacity development* and the *Happiness* of ICT employees.
- H⁶: There is a positive relationship between *Family Orientation and Atmosphere* and the *Happiness* of ICT employees.
- H⁷: There is a positive relationship between *Open Communication* and the *Happiness* of ICT employees.
- H⁸: There is a positive relationship between *Artefacts and Symbols* and the *Happiness* of ICT employees.

Based on these hypotheses, a hypothesised model is presented in Figure 6.2. Various methods used to investigate the relationships presented in this model are discussed in the following sections.

Figure 6.2: Hypothesised model: The influence of organisational culture on the happiness of employees in the ICT industry



6.3 FINDINGS

Secondary data can be defined as data used that was not collected purposefully and directly for the project under examination. Such data can, and do play a vital role in addressing many research questions (Hair, Money, Page & Samouel 2007: 118). Secondary data have become popular for research studies ranging from healthcare and education to corporate governance, social responsibility and ethics (Hair *et al.* 2007: 118).

A literature study constitutes the most important step when conducting a study on a definite topic. The researcher is able to differentiate between what is already known and what is not concerning a specific topic based on the literature study. In order to have a better understanding of the theme being researched and to identify as many factors as possible that have an influence on *organisational culture*, *Happiness* and the *Job satisfaction* of employees in the ICT industry in South Africa, a literature research was conducted. From this secondary research, a theoretical or hypothetical model was proposed. In order to accomplish the secondary research, numerous sources were consulted such as the databases available at the Nelson Mandela Metropolitan University Library which comprise Ebscohost: Academic Search Premier, E-journals, MasterFile Premier, business Source Premier; Emerald Insight; Google searches and Google scholar. The following section will discuss the primary research that was used in this study.

6.4 PRIMARY RESEARCH

This section consists of the identification of the most appropriate research paradigm, the target population, sample and data collection, as well as the techniques that will be used to analyse the data statistically.

6.4.1 RESEARCH PARADIGM

There is a clear distinction between qualitative research and quantitative research for research study (Blumberg 2008: 191). The terms qualitative and quantitative generally relate to the type of data produced in the research process. Furthermore, quantitative and qualitative researches generally tend to use different methods (Garbarino & Holland 2009: 17).

Quantitative data refers to numerical data and quantitative data analysis is the exploration of quantitative data using statistical methods (Quinlan 2011: 380; Garbarino & Holland 2009: 17). Hair *et al.* (2007: 204) argue that quantitative data collection comprises gathering data using observation guides or structured questionnaires. The data range from opinions, attitudes, beliefs, behaviours and lifestyles to general background information on people such as age, gender, income and education as well as business characteristics such as the number of employees and amount of revenue (Hair *et al.* 2007: 204). Different ways of collecting information about phenomena under investigation are used by quantitative research, such as surveys and experiments, and statistical tools are used to analyse the validity and reliability of the results (Zikmund, Badin, Carr & Friffen 2010: 137).

Contextual or qualitative methods on the other hand are generally used to specify locality, case or social setting, and describe the range of population coverage in order to scrutinise issues in depth (Garbarino & Holland 2009: 17). Qualitative data can be defined as the descriptions of things that are made without the direct allocation of numbers. Rather than collecting information by allocating numbers, the data are gathered by recording words, phrases and sometimes pictures (Hair *et al.* 2007: 152). Unstructured interviews or observation are generally used to collect qualitative data. Frequently applied qualitative approaches are in-depth interviews and focus groups (Hair *et al.* 2007: 152). Qualitative research comprises techniques such as participant observation, interviews and participatory tools that are frequently group-based and visual. The method generally used in qualitative research is open-ended questions that are formulated to capture judgements and perceptions and allow complex analyses and generally non-quantifiable cause-and-effect processes (Garbarino & Holland 2009: 17).

Quantitative research will be used in the study under investigation because of its benefits over qualitative research. Quantitative research is easier to use, consumes less money and time, and a wide range of statistical tools and numerous software programmes are available for researchers to analyse quantitative data. Most importantly, this approach will be used because of its ability to assess a relatively large number of responses; to test hypotheses and examine relationships between variables.

6.4.2 POPULATION

Quinlan (2011: 206) defined the population of a study as all the units, items or individuals pertinent to the study. A population involves individuals, organisations, groups, documents, campaigns, incidents and so on. The population of a research is also known as its universe (Quinlan 2011: 206). The population of this study will be all employees working in the ICT industry. Occasionally, a researcher will be able to collect and analyse data from the whole population, this is known as a census. However in many cases it will be impossible due to restrictions of time, money and often access to the information required. Sampling techniques therefore provide numerous methods to reduce the amount of data needed in a research (Saunders, Lewis & Thornhill 2007: 204). Sampling and sampling techniques will therefore be discussed in the following section.

6.4.3 SAMPLING AND SAMPLING TECHNIQUES

A Sample can be defined as a subgroup of the population selected to be participants of a study (Landreneau 2012: 1). Yount (2006: 1) defined sampling as the method of picking a group of subjects for a study in such a way that individuals will be an illustration of the group from which they were chosen. Sampling offers a valid alternative to a census when it would be impossible for the researcher to survey the whole population; when the researcher's budget constraints prevent him from surveying the entire population; when the researcher has time constraints and when the results are needed quickly (Saunders *et al.* 2007: 206). The sample of the study under investigation consists of employees working in the ICT industry in South Africa.

Two major groups of sample design were identified, namely, probability and non-probability sampling (Landreneau 2012: 1). Probability sampling comprises some form of haphazard selection in the choice of elements. This sampling is used when the researcher has greater confidence that the sample is representative of the population. In probability sampling, each element in the population has an equal chance to be chosen (Landreneau 2012: 1). It comprises simple random sampling, stratified random sampling, cluster sampling and systematic sampling (Saunders *et al.* 2007: 207).

Simple random sampling consists of randomly selecting a sample from a sampling frame. Systematic sampling entails selecting items at regular interval from the sampling frame. A stratified sample refers to a sample chosen, based on some distinguishing characteristic of the population, a characteristic that can influence the research. Finally, cluster sampling is used when the items or individuals who make up the population are to be found in clusters or groups (Quinlan 2011: 210).

In non-probability sampling on the other hand, the components that make up the sample are chosen by using non-random techniques. This type of sampling does not produce a representative sample as accurately as probability sampling. Non-probability sampling includes methods such as convenience sampling, quota sampling, purposive or judgemental sampling and snowball sampling (Landreneau 2012: 1; Quinlan 2011: 213).

Convenience sampling refers to selecting sample elements that are most willingly available to participate in the research and who can provide the required information (Hair *et al.* 2007: 181). A judgement or purposive sample is described as the process of selecting elements in the sample for a definite purpose (Quinlan 2011: 213). Quota sampling is comparable to stratified random sampling. The aim here is for the total sample to have a relative illustration of the strata of the target population. It differs from stratified sampling in that the selection of elements is done on a basis which suits the situation (Saunders *et al.* 2007: 227). Snowball sampling, also known as a referral sample, describes the process where the initial respondents are picked by using probability methods, then the researcher uses the initial respondents to identify similar respondents in the target population (Hair *et al.* 2007: 182).

Convenience sampling will be used for the purpose of this study, and can be defined as the process of selecting respondents that suit the purposes of the researcher. This type of sampling has the advantage of reducing time and the cost of collecting information (American Statistical Association 2003: 3; Hair *et al.* 2007: 181). Employees working in the ICT industry in South Africa were invited to participate in the study. A structured questionnaire was sent online to five ICT businesses in South Africa during the period between July and August 2013. The companies' names were not mentioned in this study as they wanted to stay anonymous.

6.4.4 METHOD OF DATA COLLECTION

According to Quinlan (2011: 223), one of the most widely used data collection methods is a self-completion survey. A self-completion survey represents a research technique where information is collected from a sample by means of a structured questionnaire. Hair *et al.* (2007: 205) describe a structured questionnaire as a scheduled set of questions designed to gather data from the respondents. It is a scientifically designed instrument for assessment of key characteristics of businesses, individuals, events and other phenomena (Hair *et al.* 2007: 205). The self-completion survey technique will be used in this study in order to collect data on the influence of organisational culture on the happiness of employees working in the ICT industry in South Africa.

The following sections will describe the process of developing the measuring instrument. This process will comprise the questions administered to the respondents, as well as the operationalisation of the different variables of interest used in this study.

6.4.4.1 The measuring instrument

The measuring instrument that will be used in this study will include four parts. The first part will comprise a comprehensive description of the purpose of the study and the type of information requested. An assurance of confidentiality and instructions on the way to complete and return the questionnaire will also be discussed in the cover letter.

The second part comprised statements relating to the different factors influencing organisational culture as well as happiness and job satisfaction. A 7-point Likert-type interval scale will be used where 1 = strongly disagree and 7 = strongly agree. Each respondent will be asked to specify the extent to which he/she agrees with the statement.

The third part will request demographic information concerning the respondents. The information requested, relating to the respondent, will include the respondent's age, gender, and population group. The respondents will also be asked how long they have been employed in the ICT business. The last section of the questionnaire will thank the respondents for their time.

In order to develop the scales measuring the various dimensions of organisational culture, the mediating variable *Happiness* and the dependent variable *Job Satisfaction*, several existing scales that have been proven valid and reliable in previous studies will be used. Where necessary, the items will be rephrased to make them suitable to the present study. The various factors, their operational definitions as well as the sources of the items measuring each factor are discussed in the subsections below. Operationalisation describes the conversion of an idea into a measurable factor (Csiernik, Birnbaum & Pierce 2010: 55). Whether the factor to be described is highly abstract or physical, the definition must identify the features of the factor and how these features are to be perceived (Cooper & Schindler 2008: 35).

(a) Job satisfaction

In order to develop the scale measuring the dependent variable *Job satisfaction*, numerous previous studies exploring job satisfaction (Dua 1994:62; Farrington 2009:406; Eybers 2010:160) were consulted. A 5-item scale was developed based on these studies. One item was developed based on the study of Dua (1994: 42), and four items were developed based on the studies of Farrington (2009: 406) and Eybers (2010: 160). Where necessary, the items were rephrased to make them more appropriate for the present study. Table 6.1 below presents these items, their sources and operationalisation.

Table 6.1: Operationalisation of dependent variables and sources of items

Dependent Variable: Job Satisfaction	Sources of items
1. I am satisfied with my job in this business.	Dua 1994:62
2. I enjoy working in this business.	Farrington 2009:406; Eybers 2010:160
3. I experience my involvement in this business as rewarding.	Farrington 2009:406; Eybers 2010:160
4. I experience my involvement in this business as fulfilling.	Farrington 2009:406; Eybers 2010:160

Table 6.1: Operationalisation of dependent variables and sources of items (continued)

5. I am satisfied with the way that we work together in this business.	Farrington 2009:406; Eybers 2010:160
<p>Operationalisation:</p> <p>In this study, <i>Job satisfaction</i> describes the extent to which an individual experiences his/her involvement in the business as rewarding, fulfilling, enjoyable and satisfactory. It also refers to employees being satisfied with the way in which employees work together in the business.</p>	

(b) Happiness

An 11-item scale (Table 6.2) was developed to assess the mediating variable *Happiness*. One item was sourced from the study of Huebner (2001: 4), two items were from the study of Sastre, Vinsonneau, Neto, Girard and Mullet (2003: 332), three items were previously used by Diener and Oishi (2009: 70) and the remaining five items were sourced from Hills and Argyle (2002: 1080). All the items were rephrased to make them more suitable for this study.

Table 6.2: Operationalisation of the mediating variables and sources of items

Mediating Variable: Happiness	Sources of items
1. I feel comfortable with myself.	Sastre, Vinsonneau, Neto, Girard & Mullet 2003:332
2. I look at the bright side of life.	Sastre <i>et al.</i> 2003: 332
3. I like myself.	Huebner 2001: 4
4. I feel particularly pleased with the way I am.	Hills & Argyle 2002: 1080
5. Life is good.	Hills & Argyle 2002: 1081
6. I think that the world is a good place	Hills & Argyle 2002: 1081

Table 6.2: Operationalisation of the mediating variables and sources of items (continued)

7. I am well satisfied about everything in my life	Hills & Argyle 2002: 1081
8. I am happy	Hills & Argyle 2002: 1081
9. In most ways my life is close to my ideal.	Diener & Oishi 2009: 70
10. I am satisfied with my life.	Diener & Oishi 2009: 70
11. If could live my life over, I would change almost nothing.	Diener & Oishi 2009: 70
<p>Operationalisation:</p> <p>In this study, <i>Happiness</i> refers to the extent to which a person perceives the overall quality of his/her life as enjoyable. In other words, it refers to the extent to which a person is happy, satisfied with his/her life, feels comfortable with himself/herself, perceives the world as a good place and looks at the bright side of life.</p>	

(c) Empowerment

With regard to the independent factor *Empowerment*, a 6-item scale was developed and is presented in Table 6.3. One of the items was sourced from Menon (2001: 166), three of the items were used in the studies by Denison *et al.* (2006: 38) as well as Yilmaz and Ergun (2008: 303), and the last two items were from the research of Jyothibabu *et al.* (2010: 312). The wording of these items was modified to make them more appropriate to the current study.

Table 6.3: Operationalisation of Empowerment and sources of items

Independent variable: Empowerment	Sources of items
1. In this business I make decisions at the level where the best information is available.	Denison <i>et al.</i> 2006: 38; Yilmaz & Ergun 2008: 303
2. In this business, I believe that I can have a positive impact.	Denison <i>et al.</i> 2006: 38; Yilmaz & Ergun 2008: 303
3. In this business my efforts to take the initiative is recognised.	Jyothibabu, Farooq & Pradhan 2010: 312
4. In this business, I have control over the resources needed to accomplish my work.	Jyothibabu <i>et al.</i> 2010: 312
5. In this business, I can influence the way work is done.	Menon 2001: 166
6. In this business, authority is delegated so that I can act on my own.	Denison <i>et al.</i> 2006: 38; Yilmaz & Ergun 2008: 303
<p>Operationalisation:</p> <p>In this study, <i>Empowerment</i> refers to the extent to which employees can make decisions and have a positive impact in the business, their efforts to take the initiative are recognised and authority is delegated so that they can act on their own.</p>	

(d) Team orientation

In this study, a 6-item scale has been constructed to measure the construct *Team orientation*. Three items were selected from Denison *et al.* (2006:38) as well as from Yilmaz and Ergun (2008: 303), and the three other items were from the study of Jyothibabu *et al.* (2010: 312). Some items were slightly modified to be more appropriate for this study. Table 6.4 presents the different items, their sources and their operationalisation.

Table 6.4: Operationalisation of Team orientation and sources of items

Independent variable: Team orientation	Sources of items
1. In this business I work as if I am part of a team.	Denison <i>et al.</i> 2006: 38; Yilmaz & Ergun 2008: 303
2. In this business, cooperation across different parts of the organisation is actively encouraged.	Denison <i>et al.</i> 2006: 38; Yilmaz & Ergun 2008: 303
3. In this business teams are used to get work done.	Denison <i>et al.</i> 2006: 38; Yilmaz & Ergun 2008: 303
4. In this business teams treat members as equals, regardless of rank, culture, or other differences.	Jyothibabu <i>et al.</i> 2010: 312
5. In this business, teams revise their thinking as a result of group discussions or information collected.	Jyothibabu <i>et al.</i> 2010: 312
6. In this business teams are rewarded for their achievement as a team.	Jyothibabu <i>et al.</i> 2010: 312
<p>Operationalisation:</p> <p>In this study Team orientation refers to the extent to which an employee feels that in the business they work as part of a team; that cooperation across different parts of the organisation is encouraged; that teams are rewarded for their achievement as a team; that the business teams treat each members as equals, regardless of rank, culture, or other differences; and that group discussion or information gathered is used by teams to revise their thinking.</p>	

(e) Capacity development

A 6-item scale (Table 6.5) was developed to assess the independent factor *Capacity development* in this study. The items were rephrased in order to adapt them to the present study. Two of the items were previously used by Denison *et al.* (2006: 38) and by Yilmaz and Ergun (2008: 303), two items were from Marsick and Watkins (2003: 144), and the last two items were sourced from Skerlavaj, Song and Lee (2010: 6400).

Table 6.5: Operationalisation of Capacity development and sources of items

Independent variable: Capacity development	Sources of items
1. In this business there is continuous investment in the improvement of my skills.	Denison <i>et al.</i> 2006: 38; Yilmaz & Ergun 2008: 303
2. In this business my capabilities are viewed as an important source of a competitive advantage.	Denison <i>et al.</i> 2006: 38; Yilmaz & Ergun 2008: 303
3. In this business gaps between my current and expected performance are measured.	Marsick & Watkins 2003: 144
4. In this business the result of the time and resources spent on my training are measured.	Marsick & Watkins 2003: 144
5. I often receive internal training.	Skerlavaj, Song & Lee 2010: 6400
6. I often receive external training.	Skerlavaj, Song & Lee 2010: 6400

Table 6.5: Operationalisation of Capacity development and sources of items (continued)

Operationalisation:

In this study **Capacity development** describes the situation where the business constantly invests in the development of employees' skills in the form of internal and external training in order to remain competitive and meet current business needs. In addition, it also refers to measuring the gap between an employee's current and expected performance, as well as time and resources spent on training.

(f) Consistency in core value and agreement

In this study, a 9-item scale (Table 6.6.) was developed to assess the factor *Consistency in core value and agreement*. The wording of these items was revised to make them more suitable for the current study. This scale comprises eight items developed by Denison *et al.* (2006: 38) as well as by Yilmaz and Ergun (2008: 304). The last item measuring this construct was self-generated from Denison *et al.* (2006: 7).

Table 6.6: Operationalisation of Consistency in core value and agreement and sources of items

Independent variable: Consistency in core value and agreement	Sources of items
1. In this business there is a clear and consistent set of values that governs the way I do business.	Denison <i>et al.</i> 2006: 38; Yilmaz & Ergun 2008: 304
2. In this business there is an ethical code that guides my behaviour and tells me right from wrong.	Denison <i>et al.</i> 2006: 38; Yilmaz & Ergun 2008: 304
3. In this business I have a strong sense of identity.	Denison <i>et al.</i> 2006: 38; Yilmaz & Ergun 2008: 304

Table 6.6: Operationalisation of Consistency in core value and agreement and sources of items (continued)

4. In this business I work hard to achieve `win-win` solutions.	Denison <i>et al.</i> 2006: 38; Yilmaz & Ergun 2008: 304
5. In this business the leaders and managers `practise what they preach`.	Self-generated from Denison <i>et al.</i> 2006: 7
6. In this business there is a unique management style.	Denison <i>et al.</i> 2006: 38; Yilmaz & Ergun 2008: 304
7. In this business there is a distinct set of management practices.	Denison <i>et al.</i> 2006: 38; Yilmaz & Ergun 2008: 304
8. In this business it is easy to reach consensus, even on difficult issues.	Denison <i>et al.</i> 2006: 38; Yilmaz & Ergun 2008: 304
9. In this business there is a clear agreement about the right way and the wrong way to do things.	Denison <i>et al.</i> 2006: 38; Yilmaz & Ergun 2008: 304
<p>Operationalisation:</p> <p>In this study <i>Consistency in core value and agreement</i> refers to the extent to which the way things are done in the business is governed by a clear and consistent set of values, employees have strong sense of identity in the business, the specific management style of the business is demonstrated by leaders, compromise is easy to reach even on difficult issues and there is a clear consensus about the right and the wrong way to do things.</p>	

(g) Creating change

Table 6.7 below demonstrates that a 6-item scale was developed to measure the factor *Creating change*. Four of the items used in this scale were extracted from Denison *et al.* (2006: 38) as well as from Yilmaz and Ergun (2008: 304). The other two items were previously used by Goldsmith (2011: 94). All the items were rephrased in order to make them more appropriate for the study under investigation.

Table 6.7: Operationalisation of Creating change and sources of items

Independent variable: Creating change	Sources of items
1. In this business, the way I do things is flexible.	Denison <i>et al.</i> 2006: 38; Yilmaz & Ergun 2008: 304
2. In this business I respond well to competitors and other changes in the business environment.	Denison <i>et al.</i> 2006: 38; Yilmaz & Ergun 2008: 304
3. In this business I am encouraged to try out new ideas.	Denison <i>et al.</i> 2006: 38; Yilmaz & Ergun 2008: 304
4. In this business I frequently improvise to solve problems when an answer is not apparent.	Denison <i>et al.</i> 2006: 38; Yilmaz & Ergun 2008: 304
5. In this business new and improved ways to do work are continually adopted.	Goldsmith 2011 :94
6. Different parts of the business often cooperate to create change.	Goldsmith 2011 :94
<p>Operationalisation:</p> <p>In this study, <i>Creating change</i> refers to the extent to which employees perceive that they have flexibility to do things, are encouraged to try out new ideas, respond well to competitors and changes in the business environment, improvise to solve problems when an answer is not apparent, continually adopt new and improved ways of doing work, as well as the extent to which change is the result of the cooperation of different parts of the business.</p>	

(h) Customer focus

In order to assess the factor *Customer focus*, a scale of six items was constructed. Two of these items were derived from previous studies by Denison *et al.* (2006: 38) as well as by Yilmaz and Ergun (2008: 304). The four other items were previously

used by Deshpande and Farley (1998: 224). In Table 6.8 below, all the items have been rephrased to be more suitable for this study.

Table 6.8: Operationalisation of Customer focus and sources of items

Independent variable: Customer focus	Sources of items
1. Customer input directly influences my business decisions.	Denison <i>et al.</i> 2006: 38; Yilmaz & Ergun 2008: 304
2. I constantly monitor my level of commitment and orientation to serving customer needs.	Denison <i>et al.</i> 2006: 38; Yilmaz & Ergun 2008: 304
3. Customer comments and recommendations often lead to changes in this business.	Deshpande & Farley 1998: 224
4. Our business objectives are driven primarily by customer satisfaction.	Deshpande & Farley 1998: 224
5. Our business strategy for competitive advantage is based on an understanding of our customers' needs.	Deshpande & Farley 1998: 224
6. In this business customer satisfaction is measured systematically and frequently.	Deshpande & Farley 1998: 224
<p>Operationalisation:</p> <p>In this study, Customer focus refers to the fact that the business's objectives are driven primarily by customer satisfaction, its strategy for competitive advantage is based on an understanding of customer needs, customer satisfaction is monitored by both the business and its employees and customer inputs influence business decisions.</p>	

(i) Organisational learning

A 6-item scale was developed to measure the factor *Organisational learning*. One of the items was derived from the study of Jyothibabu *et al.* (2010: 312), two of them have been previously used by Skerlavaj *et al.* (2010: 6400), and three were from Denison *et al.* (2006: 38) as well as from Yilmaz and Ergun (2008: 304). All the items were rewritten to make them more appropriate for the present study. Table 6.9 below presents these items, their various sources and their operationalisation.

Table 6.9: Operationalisation of organisational learning and sources of items

Independent variable: organisational learning	Sources of items
1. In this business learning is an important objective in my day-to-day work.	Denison <i>et al.</i> 2006: 38; Yilmaz & Ergun 2008: 304
2. In this business I try new business methods even if they may prove risky.	Denison <i>et al.</i> 2006: 38; Yilmaz & Ergun 2008: 304
3. In this business I am explicitly rewarded if I am a source of quality improvement.	Denison <i>et al.</i> 2006: 38; Yilmaz & Ergun 2008: 304
4. In this business failure is viewed as an opportunity for learning and improvement.	Jyothibabu <i>et al.</i> 2010: 312
5. In this business innovations are encouraged and rewarded.	Skerlavaj, Song & Lee 2010: 6400
6. In this business, employees help one another to learn.	Skerlavaj, Song & Lee 2010: 6400

Table 6.9: Operationalisation of organisational learning and sources of items (continued)

Operationalisation:

In this study, **Organisational learning** refers to the extent to which learning is an important daily objective in a business, failure is viewed as an opportunity for improvement and learning, employees can try new risky business methods and are rewarded when they are source of quality improvement, as well as the extent to which employees help each other to learn.

(j) Vision

Numerous secondary sources (Denison *et al.* 2006: 38; Yilmaz & Ergun 2008: 305; Jyothibabu *et al.* 2010: 312) were consulted to develop a 6-item scale (Table 6.10) to assess the factor *Vision*. These items have been reformulated to make them more applicable to the current study.

Table 6.10: Operationalisation of Vision and sources of items

Independent variable: Vision	Sources of items
1. The vision of our business creates excitement and motivation for me.	Denison <i>et al.</i> 2006: 38; Yilmaz & Ergun 2008: 305
2. In this business I am able to meet short-term demands without compromising our long-term vision.	Denison <i>et al.</i> 2006: 38; Yilmaz & Ergun 2008: 305
3. In this business, I am invited to contribute to organisation's vision.	Denison <i>et al.</i> 2006: 38; Yilmaz & Ergun 2008: 305
4. The employees in this business have a shared vision of what the organisation will be like in the future.	Denison <i>et al.</i> 2006: 38; Yilmaz & Ergun 2008: 305

Table 6.10: Operationalisation of Vision and sources of items (continued)

5. In this business short-term thinking often compromises our long-term vision (R).	Jyothibabu <i>et al.</i> 2010: 312
6. In this business alignment of vision is built across different levels and project teams.	Jyothibabu <i>et al.</i> 2010: 312
<p>Operationalisation:</p> <p>In this study, Vision refers to the extent to which employees in a business have a common vision that creates motivation and excitement for them and to which they can contribute, meet short-term demands without compromising long-term vision, as well as the fact that the business alignment of vision is built across different levels and project teams.</p>	

(k) Mission

In order to assess the factor *Mission*, a 5-item scale was developed. This scale was previously used by Denison *et al.* (2006: 38) as well as by Yilmaz and Ergun (2008: 304). The wordings of these items were modified so that these items are more appropriate for the current study. Table 6.11 below presents these items and their sources as well as the operationalisation of the factor.

Table 6.11: Operationalisation of Mission and sources of items

Independent variable: Mission	Sources of items
1. In this business I have a long-term purpose and direction.	Denison <i>et al.</i> 2006: 38; Yilmaz & Ergun 2008: 304
2. In this business there is a clear mission that gives meaning and direction to my work.	Denison <i>et al.</i> 2006: 38; Yilmaz & Ergun 2008: 304

Table 6.11: Operationalisation of Mission and sources of items (continued)

3. The strategy of this business leads other organisations to change the way they compete in the industry.	Denison <i>et al.</i> 2006: 38; Yilmaz & Ergun 2008: 304
4. In this business there is a clear strategy for the future.	Denison <i>et al.</i> 2006: 38; Yilmaz & Ergun 2008: 304
5. The strategic direction of our business is clear (R).	Denison <i>et al.</i> 2006: 38; Yilmaz & Ergun 2008: 304
6. In this business I have a long-term purpose and direction.	Denison <i>et al.</i> 2006: 38; Yilmaz & Ergun 2008: 304
<p>Operationalisation:</p> <p>In this study, Mission refers to the extent to which employees have long-term purpose and direction, as well as the extent to which there is a clear strategy in this business that leads other organisations to change the way they compete in the industry.</p>	

(I) Goals and objectives

For the purpose of this study, a 5-item scale was developed to assess the factor *Goals and objectives*. The scale developed by Denison *et al.* (2006: 38) as well as by Yilmaz and Ergun (2008: 304) was used to develop the current scale. All items were rephrased to make them appropriate to the present study. Table 6.12 presents an operationalisation as well as the different items and their sources.

Table 6.12: Operationalisation of Goals and objectives and sources of item

Independent variable: Goals and objectives	Sources of items
1. In this business my progress is measured against stated goals.	Denison <i>et al.</i> 2006: 38; Yilmaz & Ergun 2008: 304
2. In this business I understand what needs to be done.	Denison <i>et al.</i> 2006: 38; Yilmaz & Ergun 2008: 304

Table 6.12: Operationalisation of Goals and objectives and sources of item (continued)

3. Work is organised so that I can see the relationship between my job and the goals of the organisations.	Denison <i>et al.</i> 2006: 38; Yilmaz & Ergun 2008: 304
4. In this business there is a widespread agreement about goals to be achieved.	Denison <i>et al.</i> 2006: 38; Yilmaz & Ergun 2008: 304
5. In this business leaders set goals that are ambitious, but realistic.	Denison <i>et al.</i> 2006: 38; Yilmaz & Ergun 2008: 303
6. In this business my progress is measured against stated goals.	Denison <i>et al.</i> 2006: 38; Yilmaz & Ergun 2008: 304
<p>Operationalisation:</p> <p>In this study, Goals and objective describes the extent to which leaders set clear goals and ambitions, progress is measure against stated goals, employees understand what needs to be done and can see the relationship between their jobs and the goals to be achieved in the organisations.</p>	

(m) Family orientation and atmosphere

A 7-item scale (Table 6.13) was developed to measure the factor *Family orientation and atmosphere*. The wording of these items was adapted for the current study. Four items originated from the study by Tang, Kim and O'Donald (2000: 546) and three from the study by Bradley, McDonald and Brown (2010: 11944).

Table 6.13: Operationalisation of Family orientation and atmosphere and sources of items

Independent variable: Family orientation and atmosphere	Sources of items
1. In this business I am treated as a total person.	Tang, Kim & O'Donald 2000: 546
2. This business has a real interest in my welfare.	Tang <i>et al.</i> 2000: 546
3. Management in this business encourages supervisors to be sensitive to my personal concerns.	Tang <i>et al.</i> 2000: 546
4. In general, managers in this business are accomodating of my non-work needs.	Tang <i>et al.</i> 2000: 546
5. This business tries to create a unique family atmosphere.	Bradley, McDonald & Brown 2010: 11944
6. In this business loyalty and dedication are emphasised.	Bradley <i>et al.</i> 2010: 11944
7. Managers in this business are sympathetic towards employees' childcare responsibilities.	Bradley <i>et al.</i> 2010: 11944
<p>Operationalisation:</p> <p>In this study, Family orientation and atmosphere refers to the extent to which supervisors are encouraged to be sensitive to employees' non-work needs, employees are treated as total persons and the business has a real interest in employees' welfare. It also incorporates the extent to which a unique family atmosphere is created in the business where dedication and loyalty are emphasised,</p>	

(n) Open communication

In order to measure the factor *Open communication*, a 6-item scale was developed. One of these items was previously used in Denison *et al.* (2006: 38) as well as by Yilmaz and Ergun (2008: 304), another one was sourced from Marsick and Watkins (2003: 144), the last four items were taken from the study by Tang *et al.* (2000: 546). These items were revised to make them more suitable for this study and are presented in Table 6.14.

Table 6.14: Operationalisation of Open communication and sources of items

Independent variable: Open communication	Sources of items
1. In this business, managers/supervisors encourage me to speak up when I disagree with decisions.	Tang <i>et al.</i> 2000: 546;
2. In this business I have the freedom to express my ideas.	Tang <i>et al.</i> 2000: 546
3. In this business managers value my ideas and inputs.	Tang <i>et al.</i> 2000: 546
4. In this business information is widely shared so that I can get the information I need.	Denison <i>et al.</i> 2006: 38; Yilmaz & Ergun 2008: 303
5. This business uses two-way communication on a regular basis, such as suggestion systems, electronic bulletin boards, or town hall/open meetings.	Marsick & Watkins 2003: 144

Table 6.14: Operationalisation of Open communication and sources of items (continued)

6. This business emphasises open communication.	Tang <i>et al.</i> 2000: 546
<p>Operationalisation:</p> <p>In this study, <i>Open communication</i> refers to the extent to which managers encourage employees to express their ideas and to speak up when they disagree with a decision, information is widely shared and two-way communication such as suggestion systems, electronic bulletin boards, or town hall/open meeting is used on a regular basis.</p>	

(o) Artefacts and symbols

A 14-item scale (Table 6.15) was developed to measure the factor *Artefacts and symbols*. All the items used in this scale were self-generated. One item was self-generated from The Australian Cooperation Research Centre for Construction Innovation (2001: 14), three were self-generated from Chatterjee (2012), three from Johansson (2012) and seven from Schein (2010: 23).

Table 6.15: Operationalisation of Artefacts and symbols and sources of items

Independent variable: Artefacts and symbols	Sources of items
1. In this business, the physical environment (e.g. chairs, structure of offices and architecture) encourages me to be productive.	Self-generated from Schein 2010: 23
2. In this business, the physical environment (e.g. chairs, structure of offices and architecture) is conducive to my creativity.	Self-generated from Schein 2010: 23

**Table 6.15: Operationalisation of Artefacts and symbols and sources of items
(continued)**

3. The physical environment in this business encourages me to exchange ideas.	Self-generated from Schein 2010: 23
4. In this business there are restaurants or other areas where I can eat meals and/or interact socially.	Self-generated from The Australian Cooperation Research Centre for Construction Innovation 2001: 14
5. The furniture in this business encourages my creativity.	Self-generated from Chatterjee 2012
6. In this business there are rooms where I can relax.	Self-generated from Chatterjee 2012
7. In this business, the physical environment (e.g. chairs, structure of offices and architecture) encourages open communication among employees.	Self-generated from Johansson 2012
8. In this business, free meals are provided.	Self-generated from Johansson 2012
9. In this business there are sport or gym facilities.	Self-generated from Schein 2010: 23
10. In this business there are facilities that encourage recreational activities, such as playing darts and video games.	Self-generated from Schein 2010: 23
11. In this business employees have an informal dress code.	Self-generated from Schein 2010: 23
12. In this business employees address each other by their names.	Self-generated from Chatterjee 2012

Table 6.15: Operationalisation of Artefacts and symbols and sources of items (continued)

13. In this business, our own business/organisational language was developed (e.g. in Google employees call themselves `Googlers`).	Self-generated from Johansson 2012
14. This business has well-known values, ceremonies and rituals.	Self-generated from Schein 2010: 23
<p>Operationalisation:</p> <p>In this study, Artefacts and symbols refer to what an individual can feel, hear and see when walking into a business, such as the physical environment that encourages productivity, creativity and exchange of ideas, as well as areas where employees can eat meals and interact socially. It also refers to the dress code in the business, the way employees address each other, the language used in the business as well as the presence of facilities that encourage recreational activities such as sports, darts and video games.</p>	

6.4.5 DATA COLLECTION

Employees working in the ICT industry in South Africa were identified by convenience sampling and requested to complete the questionnaire. The questionnaire was sent online to potential respondents. Five ICT businesses were targeted in the country. A cover letter was first sent to ICT business managers in order to present the study background and required an authorisation to send the questionnaire to employees. The link of the questionnaire was then sent to employees. Numerous calls and emails were done and sent by Prof Calitz in order to follow up with the questionnaires. One company refused to fill in the questionnaire because they had just received a survey prior to this one and they did not want to confuse their employees.

6.5 DATA ANALYSIS

This section will start with the evaluation of the reliability and validity of the measuring instrument. A description of the statistic used will then be given followed

by a sub-section on Pearson's coefficient. The means by which the relationships investigated in this study were assessed will be described and this section will end with a discussion on the ANOVA test used to determine the influence of demographic variables on the factors investigated in this study.

6.5.1 RELIABILITY AND VALIDITY

Cohen, Manion and Morrison (2013: 199) define reliability as the extent to which measurement tested under the same conditions will provide similar results. According to Bryman and Bell (2007: 163), there are three components considered when assessing the reliability of a measure namely stability, internal consistency and inter-observer consistency. Internal consistency is defined as the degree to which all the items in a test evaluate the same concept or construct and therefore it is linked to the inter-relatedness of the items within the test (Travakol & Dennick 2011: 1).

Cronbach's alpha can be described as the internal consistency or average correlation of statements or scales which form part of a survey instrument. Cronbach's alpha is a measure of reliability (Gravetter & Forzano 2011:480). The Cronbach's alpha coefficient ranges from 0 to 1 and is used to determine the reliability of factors from a survey. The Cronbach alpha coefficient will be used in order to measure the reliability of measuring instrument and for the purpose of this study, a Cronbach alpha of 0.7 will be considered as a suitable reliability coefficient and lower than that could lead to decreasing reliability.

Validity on the other hand can be described as the extent to which the measured items mirror the characteristics it is proposed to measure (Cohen *et al.* 2013: 179). Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) are the two main statistical techniques used to evaluate validity (Atkinson *et al.* 2011: 569).

Exploratory Factor Analysis is a statistical approach which is used to examine the internal reliability and validity of a measure. EFA is normally used for the examination of construct validity in cases where the relationships amongst different variables are ambiguous or unknown (Atkinson *et al.* 2011: 569). According to Suhr (2006:2), the aims of Exploratory Factor Analysis are to determine latent constructs in the set of variables, explain variances that occur amongst the variables and define the factors or latent constructs.

A Confirmatory Factor Analysis (CFA) on the other hand, can be defined as a statistical method used to prove the factor structure of a group of identified variables (Suhr 2006: 1). CFA enables the researcher to test the relationship between dependent variables and independent variables. The researcher in CFA uses information about the theory, empirical research, or both, suggests the relationship pattern, a priori and then tests the hypothesis statistically (Suhr 2006: 1).

CFA will be conducted on the dependent variables for two motives. Firstly, it is recognised in the literature that *Happiness* (Schimmack 2006: 76; Diener *et al.* 1999: 278-297; Oishi, Graham, Kesebir, & Galinha 2013: 22) and *Job satisfaction* (Letele-Mataboee 2012: 6; Hansia 2009: 113-114; Crossman and Zaki 2003: 368-376) are independent factors. Secondly, a Confirmatory Factor Analysis is generally used when items from previous research are used to assess certain factors (Reinard 2006: 428) as it is the case in this study.

On the other hand, an Exploratory Factor Analysis (EFA) will be conducted to evaluate the validity of the scales measuring the independent variables of this study, namely *Empowerment, Team Orientation, Capacity development, Consistency in core values and agreement, Creating change, Customer focus, Organisation learning, Vision, Mission, Goals and objectives, Family orientation and atmosphere, Open Communication* and *Artefacts and symbols*. Exploratory Factor Analysis will be used on the independent variables due to the fact that many of the scales used to measure these variables have not been confirmed to the same extent as the scales measuring the dependent and the mediating variables.

6.5.2 DESCRIPTIVE STATISTICS

Numerous descriptive statistics will be calculated in order to summarise the sample data. These statistics are the mean, standard deviation and frequency distribution. The mean or arithmetic mean is the most common summary statistic to assess the central position of a distribution. It is also known as the average (Köhler, Kohler & Kreuter 2005:153).

The standard deviation can be described as the distance between each score and the mean, and this number will increase in value as the scores increase in their

variety or heterogeneity. The standard deviation is used to describe the dispersion of the population (Healey 2009:110).

A frequency distribution is a table containing the number of individuals included in each category on the scale of measurement. A frequency distribution generally takes a disordered group of scores and arranges them from the highest to the lowest in a table, hence grouping individuals who have the same score. The frequency distribution allows the researchers to see whether the scores are regrouped in one area or spread all across the entire scale, whether they are generally high or low, and this enables the researchers to have a clear picture of data (Gravetter & Wallnau 2008:37).

6.5.3 PEARSON'S COEFFICIENT OF CORRELATION

The Pearson's coefficient of correlation will be used in this study to evaluate the relationship between the different factors under examination. Correlation relates to the procedure for instituting whether or not relationships exist between two variables. The Correlation coefficient can therefore be defined as a single summary number that enables a clear understanding about how closely one variable is connected to another variable (Higgins 2005: 1).

6.5.4 MULTIPLE REGRESSION ANALYSES

A Multiple Regression Analysis is the approximation of the functional relationship that may exist between a dependent variable and a set of independent or explanatory variables. This relationship may sometimes model a hypothesised theoretical relationship between the dependent and independents variable, whereas at other times it may simply be a mathematical estimate of such a relationship (Marasinghe & Kennedy 2008: 208). A Multiple Regression Analysis will be realised in order to establish the influence of the different factors identified on the mediating variable *Happiness* and the influence of *Happiness* on the dependent variables *Job Satisfaction*.

6.5.5 THE ANOVA TEST

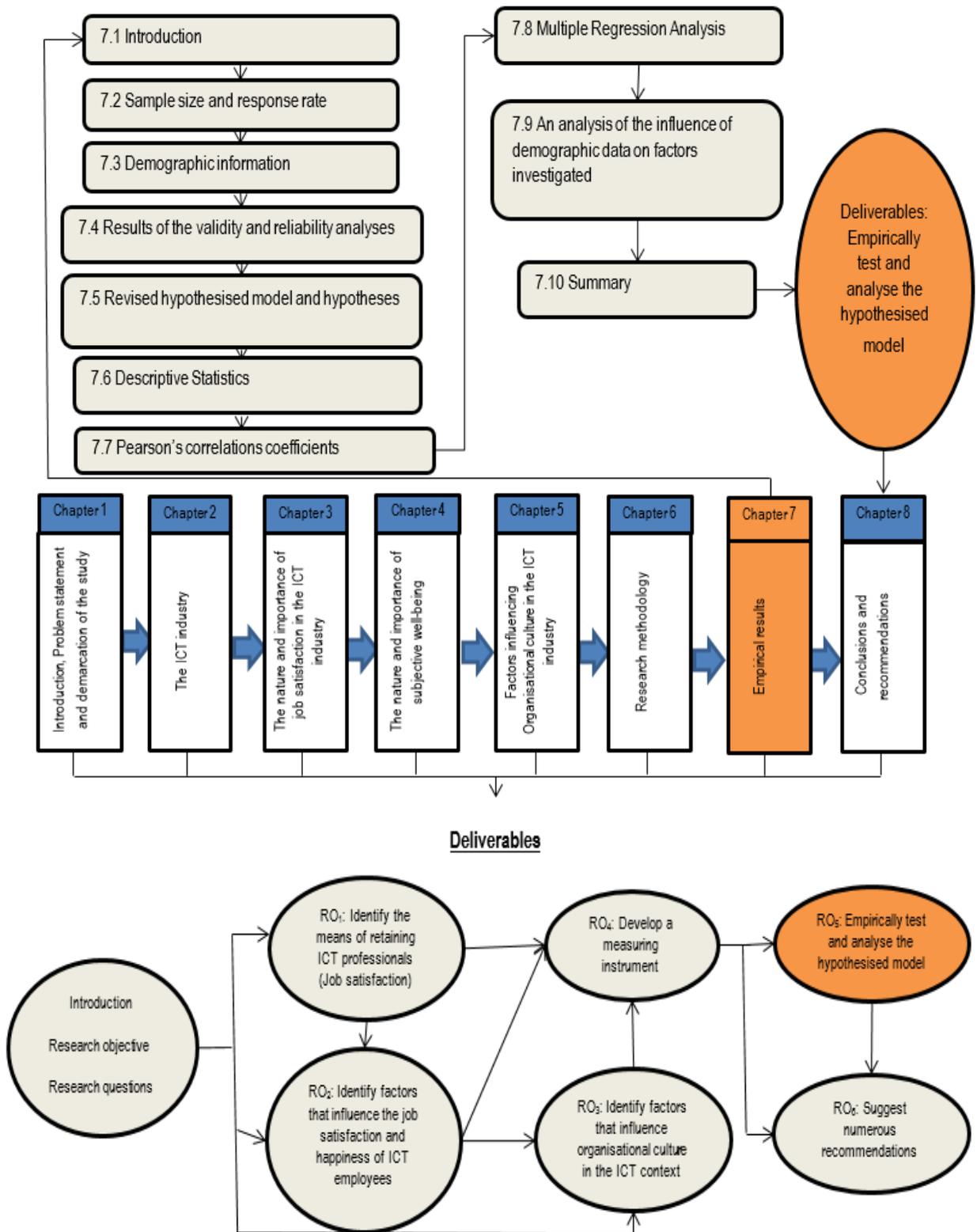
An Analysis of Variance (ANOVA) can be described as a statistical test used to establish whether there are significant differences between the means of various

data sets. The ANOVA observes the variance of the data set means within the class of variance of the data sets themselves (Fred, Filipe & Gamboa 2010:27). For the purpose of this study, the ANOVA test will be undertaken to investigate the influence of selected demographic factors namely *Gender, Population group, Age group* and *Years of service* on various factors under investigation. Additionally, the Bonferroni post-hoc test is a statistical test that is used to determine which groups are different in their means. In this study, when a statistically significant difference will be identified between a factor and a demographic variable, the Bonferroni post-hoc test will be used to detach the difference (Merkley 2009: 124).

6.6 SUMMARY

In this chapter research methodology used in this study was described. The chapter started by listing the hypotheses that were formulated from the previous chapters. A hypothesised model showing these hypotheses was then suggested. The secondary and primary research methods were described and the appropriate research paradigm chosen. The population, sample and sampling techniques were described. With regard to the data collection procedure, the development of the measuring instrument and the operationalisation of the constructs were explained. The procedure for collecting the primary data was also clarified. Finally, the statistical techniques adopted to analyse the data were labelled and their use motivated. Chapter 7 will elaborate on the results of the various statistical analyses.

Figure 7.1: Structure and deliverable of Chapter 7



CHAPTER 7

EMPIRICAL RESULTS

7.1 INTRODUCTION

In the previous chapter, the methodology and research design that were used to analyse the collected data of the study under investigation were discussed. It comprised a description of the secondary and primary research used in this study, as well as a discussion of the data analyses techniques used in the research study. This chapter will elaborate on the empirical results as a result of the statistical analyses conducted. The aim of this chapter is to empirically test and analyse all the relationships depicted in the hypothesised model. This chapter is therefore addressing the research question five (RQ₅) and the research objective five (RO₅).

This chapter starts by analysing the responses in order to determine the number of responses and response rate (Section 7.2). A description of the sample of this study was then given by means of a summary of the demographic information concerning the respondents (Section 7.3). A discussion on the different methods used to assess the validity and the reliability of the measuring instrument of this study will follow (Section 7.4). A Confirmatory Factor Analysis was used for the assessment of the validity of the scales measuring the dependent variable *Job satisfaction* and the mediating variable *Happiness*, then the validity of the scales measuring the independent variables was evaluated by means of an Exploratory Factor Analysis. Cronbach's alpha coefficients were calculated to assess the reliability of all the scales in the measuring instrument.

A discussion of the revised hypothesised model based on the results provided by the validity and reliability tests was done (Section 7.5). Subsequently, a summary of the sample data will be provided by means of descriptive statistics including the means, standard deviations and frequency distributions (Section 7.6). The existence of relationships between variables investigated in this study will be tested by the Pearson's correlation (Section 7.7) followed by an analysis of the relationships between various independent variables on the mediating variable *Happiness* and between *Happiness* and the dependent variable *Job satisfaction* by means of regression analysis (Section 7.8). The next section of this chapter (Section 7.9) will

deal with the analysis of the influence of demographic data on all the variables investigated in this study by means of ANOVA tests. Lastly, a summary of the chapter will be given (Section 7.9).

7.2 SAMPLE SIZE AND RESPONSE RATE

Overall, 187 usable questionnaires were received from respondents. According to Hair, Black, Anderson and Tatham (2006: 740), the sample size was found to be acceptable. Table 7.1 gives a summary of the number of questionnaires sent out, the number of usable answers and the response rate.

Table 7.1: Response rate

	Respondents
Questionnaires mailed	960
Return-to-sender	0
Opt-out	180
Partially complete	1
Removed during cleanup	6
Effective population	773
Usable questionnaires received	187
Response rate	24.19%

7.3 DEMOGRAPHIC INFORMATION

The last section of the questionnaire comprised numerous questions concerning the demographic information of the respondents, as well as the length of time the respondents have been employed by the ICT business. The biographical information is provided in Table 7.2. The following paragraphs will elaborate on these findings.

Table 7.2: Demographic information pertaining to respondents' background

Gender	Frequency	Percentage
Male	127	67.91
Female	60	32.09
Missing	0	0
Total	187	100%
Age group	Frequency	Percentage
Between 18 and 25 years	35	18.72
Between 26 and 35 years	90	48.13
Between 36 and 45 years	33	17.65
Between 46 and 55 years	20	10.69
More than 56 years	9	4.81
Missing	0	0
Total	187	100%
Population group	Frequency	Percentage
White	142	75.93
Black	12	6.42
Asian	14	7.49
Coloured	11	5.88
Other	8	4.28
Missing	0	0

Table 7.2: Demographic information pertaining to respondents' background (continued)

Total	187	100%
Time worked in the ICT business	Frequency	Percentage
Less than 1 year	34	18.18
Between 1 and 2 years	30	16.04
Between 3 and 5 years	58	31.02
Between 6 and 10 years	33	17.65
Between 11 and 20 years	22	11.76
More than 21 years	10	5.35
Missing values	0	0
Total	187	100%

As indicated in Table 7.2 above, it can be seen that the majority of the respondents that participated in this study were male (67.91%). Only 32.09% of the respondents were women. With regard to the *Age group*, 48.13% of the participants of this study were between 26 and 36 years of age, followed by the age group between 18 and 25 years of age (18.72%). The smallest percentages were reported for respondents of 56 years and older (4.81%), and participants between the ages of 46 and 55 years (10.69%). The majority of the respondents can be classified as falling into the “younger” group as can be expected from the ICT industry. *Population group* was the last section focusing on background information. White ICT employees were by far the majority of participants with 75.93% of responses. There was 7.49% of Asians participating in this study, followed by Black respondents (6.42%). The least percentage was reported for employees falling under the population group named Other (4.28%). This population group mostly comprised Jews, Persians or Arabs.

As far as the length of time the participants had been working in the ICT business is concerned, most of the respondents (31.02%) reported that they had been working

in the ICT business between three and five years, followed by respondents who had been working in the ICT business for less than a year (18.18%). The smallest number of respondents had worked for the ICT business for more than 21 years (5.35%), as well as those that had worked for the ICT business between 11 and 20 years (11.76%).

7.4 RESULTS OF THE VALIDITY AND RELIABILITY ANALYSES

The data gathered from the fully complete questionnaires was exposed to numerous statistical analyses using the software programme Statistica (Statsoft, Inc., 2013). The validity of the scales measuring the dependent variable *Job satisfaction* and the mediating variable *Happiness* was assessed using a Confirmatory Factor Analysis. The method of initial factor extraction, was Principal Component Analysis (PCA) and factor rotation was not applicable due to the fact that there was only one factor per scale. Confirmatory Factor Analysis was done on the dependent variables for two reasons. Firstly, it is well-known in the literature that *Job satisfaction* (Letele-Mataboee 2012: 6; Hansia 2009: 113-114; Crossman and Zaki 2003: 368-376) and *Happiness* (Schimmack 2006: 76; Diener *et al.* 1999: 278-297; Oishi, Graham, Kesebir, & Galinha 2013: 22) are independent factors. Secondly, a Confirmatory Factor Analysis is common when items from previous research are used to assess certain factors (Reinard 2006: 428) as it is the case in this study.

An Exploratory Factor Analysis (EFA) was done to evaluate the validity of the scales measuring the independent variables of this study, namely *Empowerment, Team Orientation, Capacity development, Consistency in core values and agreement, Creating change, Customer focus, Organisation learning, Vision, Mission, Goals and objectives, Family orientation and atmosphere, Open Communication and Artefacts and symbols*. The extraction and rotation method used in this study was Principal Component Analysis with a varimax raw rotation. Exploratory Factor Analysis was used on the independent variables because many of the scales used to assess these variables have not been confirmed to the same extent as the scales measuring the dependent and the mediating variables. The percentage of variance explained and the individual factor loading were considered while determining the factors to be extracted. For the purpose of this study, items that loaded together onto one factor and reported loading factors higher than 0.4 were considered significant. For further

statistical analysis, significant factors with two or fewer items loading onto them were not taken into consideration.

Reliability on the other hand refers to the extent to which a measuring instrument tested under the same conditions will provide similar results (Cohen *et al.* 2013: 199). The statistical technique used to assess the reliability of the measuring instrument of this study was internal consistency. Based on this technique, a Cronbach's alpha coefficient is calculated for each item, with items scoring Cronbach's alpha coefficient higher than 0.70 considered as reliable (Slaughter 2009: 114).

7.4.1 DEPENDENT AND MEDIATING VARIABLE

A Confirmatory Factor Analysis was conducted with the aim of evaluating the validity of the scale measuring the dependent variable of this study, namely, *Job Satisfaction*, as well as the mediating variable of this study namely *Happiness*. The factor structure of the dependent and the mediating variable is presented in Table 7.3 below. The findings of the Confirmatory Factor Analysis for each of these constructs are elaborated on in the following sections.

Table 7.3: Factor Structure: dependent and mediating variables

Items	SATISFIED	HAPPINESS
SATISFIED 3	0.967	-0.064
SATISFIED 4	0.921	-0.014
SATISFIED 1	0.863	0.026
SATISFIED 5	0.741	0.016
SATISFIED 2	0.720	0.154
HAPPIN 8	0.088	0.837
HAPPIN 10	0.024	0.794
HAPPIN 9	-0.004	0.779
HAPPIN 5	0.078	0.774

Table 7.3: Factor Structure: dependent and mediating variables (continued)

HAPPIN 3	-0.125	0.734
HAPPIN 4	0.030	0.724
HAPPIN 2	0.079	0.703
HAPPIN 7	0.006	0.702
HAPPIN 1	0.047	0.685
HAPPIN 6	-0.054	0.639
HAPPIN 11	0.035	0.529

7.4.1.1 Dependent variable: Job satisfaction

Five items were initially developed to measure *Job Satisfaction*, namely SATISFIED 1, SATISFIED 2, SATISFIED 3, SATISFIED 4 and SATISFIED 5. All these items loaded together as expected and *Job Satisfaction* explained 22.75% of the variance in the data. It can be observed from Table 7.4 that factor loadings between 0.967 and 0.720 were returned for this factor. Thus evidence of discriminant validity for this construct is provided. A Cronbach's alpha coefficient of 0.932, which is higher than the lower limit of 0.70, was also returned for *Job Satisfaction*. This provides ample evidence of reliability for this factor. The operational definition of *Job Satisfaction* will remain the same since all the items that intended to measure this factor loaded together. *Job Satisfaction* in this study can therefore be described as the extent to which an individual experiences his/her involvement in the business as rewarding, fulfilling, enjoyable and satisfactory. It also refers to employees being satisfied with the way in which employees work together in the business.

Table 7.4: Validity and reliability of Job satisfaction

% of Variance: 22.75		Cronbach's alpha:0.932		
Items		Factor loading	Item-total correl.	Cronbach's alpha after deletion
SATISFIED 3	I experience my involvement in this business as rewarding	0.967	0.877	0.906
SATISFIED 4	I experience my involvement in this business as fulfilling	0.921	0.868	0.907
SATISFIED 1	I am satisfied with my job in this business	0.863	0.838	0.913
SATISFIED 5	I am satisfied with the way that we work together in this business	0.741	0.793	0.931
SATISFIED 2	I enjoy working in this business	0.720	0.737	0.922

7.4.1.2 Mediating variable: Happiness

A Confirmatory Factor Analysis was conducted in order to assess the validity of the scale measuring the mediating variable *Happiness*. As stated before, Confirmatory Factor Analysis is used because the construct is well-known and has been tested numerous times before. Eleven original items were developed to measure *Happiness*, namely HAPPIN 1, HAPPIN 2, HAPPIN 3, HAPPIN 4, HAPPIN 5, HAPPIN 6, HAPPIN 7, HAPPIN 8, HAPPIN 9, HAPPIN 10 and HAPPIN 11. All these factors loaded together as expected onto this construct. Factor loading ranging between 0.837 and 0.529 was reported for this factor in Table 7.5. *Happiness* explained 36.08% of the variance in the data. A Cronbach's alpha coefficient of 0.922 was reported for this factor, which is greater than the lower limit of 0.70. Therefore this factor demonstrated enough evidence of validity and reliability. Since all the items that intended to measure this factor loaded together, the operational definition of *Happiness* will remain the same. *Happiness* in this study refers to the extent to which a person perceives the overall quality of his/her life as enjoyable. In other words, it refers to the extent to which a person is happy, satisfied with his/her life, feels comfortable with himself/herself, perceives the world as a good place and looks at the bright side of life.

Table 7.5: Validity and Reliability of the mediating variable: Happiness

% of Variance: 36.08		Cronbach's alpha: 0.922		
Items		Factor loading	Item-total correl.	Cronbach's alpha after deletion
HAPPIN 8	I am happy	0.837	0.852	0.907
HAPPIN 10	I am satisfied with my life	0.794	0.781	0.910
HAPPIN 9	In most ways my life is close to my ideal	0.779	0.751	0.911
HAPPIN 5	Life is good	0.774	0.786	0.910
HAPPIN 3	I like myself	0.734	0.625	0.918
HAPPIN 4	I feel particularly pleased with the way I am	0.724	0.705	0.914
HAPPIN 2	I look at the bright side of life	0.703	0.713	0.913
HAPPIN 7	I am well satisfied about everything in my life	0.702	0.682	0.915
HAPPIN 1	I feel comfortable with myself	0.685	0.670	0.915
HAPPIN 6	I think that the world is a good place	0.639	0.582	0.921
HAPPIN 11	If could live my life over, I would change almost nothing	0.529	0.530	0.925

7.4.2 INDEPENDENT VARIABLES

An Exploratory Factor Analysis was supposed to be undertaken in order to analyse the independent variables of this study. However, the number of variables or estimated parameters of the independent variables of this study were large and the number of respondents was small, making the factor analysis impossible. This problem was addressed through the use of item parcelling (De Bruin 2004: 16). Item parcelling will considerably improve the ratio of respondents to these characteristics (Hau & Marsh 2004: 328).

Item parcelling is an assessment practice that is used in multivariate approaches to psychometrics, especially for use with latent-variable analysis techniques (e.g.

Exploratory Factor Analysis, SEM). An item parcel is defined as a combined-level indicator comprising the average or the sum of two or more items (Little, Cunningham, Shahar & Widaman 2002: 152).

Item parcels are described as more reliable than individual items, are more likely to have linear relations with each other and with factors, as well as have more scale points. Hence one would assume the factor analysis of item parcels would deliver more satisfactory factor analytical results with improved model-data fit (De Bruin 2004: 18). Furthermore, Hau and Marsh (2004: 328) listed some advantages of items parcelling, namely; more definitive rotational results; increased reliability of item-parcel responses; closer approximations to normal theory-based estimation; less violation of normality assumption; fewer parameters to be estimated; reduction in idiosyncratic characteristics of items; more stable parameter estimates; and simplification of model interpretation.

The shared variance of items is assembled when items are combined, which means that the proportion of common variance increases relative to the proportion of unique variance. This leads to communalities and stronger factor loadings (De Bruin 2004: 18). Furthermore, the distributions of item parcels are likely to be more normal than the distribution of individual items. Moreover, the number of scale points in items parcels is increased and the distances between scales points are likely to be reduced (De Bruin 2004: 18).

In contrast, Little *et al.* (2002: 153) highlight some disadvantages of the practice of item parcelling. The authors argue that parcelling misrepresents the reality and it camouflages the issues of incorrect model specification or poor item selection. These critics are of the opinion that all sources of variance in an item should be reflected in a Confirmatory Factor Analysis. Dissimilarly, the proponents of item parcelling argue that it is impossible to account a priori for every possible source of variance in each item (Little *et al.* 2002: 153).

Three methods of parcelling are identified in the literature review, namely, random assignment items to parcel, a priori parcel construction and empirical assignment of items to parcel (De Bruin 2004: 18). Random assignment of items to a parcel is used when the items form an essentially unidimensional scale. Under this condition, each item is viewed as an equivalent and alternative indicator of the construct or factor.

When using this method, the researcher first decides on the number of parcels to be used and then randomly allocates items to parcels (De Bruin 2004: 18).

The second method of parcelling consists of intentionally constructing homogenous groups of items that are combined to form parcels. This method requires of the researchers first to specify the number of parcels and the signification of the parcels. Homogenous groups of items are then written for each parcel (De Bruin 2004: 18).

Empirical assignment of items to a parcel is used in this study for the analysis of the independent variables. In empirical assignment of items to a parcel, parcels may be formed empirically, where the total group of items is subjected to a factor analysis. Sets of highly correlating items are then pooled to form parcels, which then are used as the input variables for further analyses (De Bruin 2004: 18). The parcelling of items is presented in Appendix 3.

In order to assess the validity of all the independent variables in this study, namely, *Empowerment, Team Orientation, Capacity development, Consistency in core values and agreement, Creating change, Customer focus, Organisation learning, Vision, Mission, Goals and objectives, Family orientation and atmosphere, Open Communication and Artefacts and symbols*, an Exploratory Factor Analysis was conducted. After the item parcelling process was completed, seven factors were extracted as a result of the Exploratory Factor Analysis which illustrated enough evidence of validity and reliability. These factors are: *Customer focus, Capacity development, Artefacts and symbols, Creating change, Team orientation, Strategic direction and intent* and *Family orientation and atmosphere*. The factor structure for the independent variable is presented in Table 7.6. The result of the Exploratory Factor Analysis for each of these factors is elaborated on in subsequent sections.

Table 7.6: Factor Structure: Independent variables

w	Items	CUSTOM	CAPA	ART	CHANG	TEAM	MISSN	FAM
CUSTOM III	CUSTOM 4	0.744	-0.010	-0.010	0.047	0.003	0.131	0.003
	CUSTOM 5							
CUSTOM II	CUSTOM 2	0.699	0.120	-0.051	0.040	0.074	0.129	-0.012
	CUSTOM 6							
CUSTOM I	CUSTOM 1	0.678	0.006	-0.038	0.030	0.013	-0.139	0.017
	CUSTOM 3							
CAPA III	CAPA 5	0.072	0.711	-0.024	-0.045	-0.075	-0.001	-0.116
	CAPA 6							
CAPA I	CAPA 1	-0.064	0.507	-0.167	0.216	0.144	0.002	-0.143
	CAPA 2							
CAPA II	CAPA 3	0.037	0.466	0.060	0.018	0.271	0.029	0.002
	CAPA 4							
ART III	ART5	0.046	0.084	-0.784	0.048	0.074	-0.032	0.095
	ART 7							
ART I	ART 1	0.044	0.076	-0.735	0.077	-0.051	0.113	0.060
	ART 2							
ART II	ART 3	0.017	-0.106	-0.648	-0.090	0.106	-0.028	-0.187
	ART 4							

Table 7.6: Factor Structure: Independent variables (continued)

CHANGE I	CHANGE 1	0.136	-0.114	0.067	0.621	0.104	0.059	-0.087
	CHANGE 3							
CHANGE II	CHANGE 2	0.204	-0.036	-0.083	0.582	-0.046	0.050	-0.056
	CHANGE 4							
EMPOWR III	EMPOWR 4	-0.152	0.115	-0.142	0.569	0.094	-0.023	-0.021
	EMPOWR 5							
LEARN I	LEARN 1	0.077	0.188	-0.029	0.420	-0.031	0.106	-0.047
	LEARN 2							
TEAM I	TEAM 1	0.151	0.008	-0.106	0.072	0.587	-0.056	-0.089
	TEAM 3							
TEAM II	TEAM 2	0.030	0.043	-0.057	0.066	0.520	0.181	0.028
	TEAM 6							
ART IV	ART 6	-0.024	-0.187	-0.284	-0.031	0.480	0.000	-0.001
	ART 9							
MISSN II	MISSN 3	0.107	-0.081	-0.068	0.151	-0.030	0.631	-0.059
	MISSN 4							
	MISSN 5							
GOALS II	GOALS 3	0.147	0.094	-0.077	0.022	0.091	0.563	0.045
	GOALS 5							
MISSN I	MISSN 1	-0.114	0.078	0.041	0.041	-0.114	0.506	-0.131
	MISSN 2							

Table 7.6: Factor Structure: Independent variables (continued)

GOALS I	GOALS 1	0.178	0.131	-0.007	-0.046	0.126	0.484	-0.002
	GOALS 2							
	GOALS 4							
VISION III	VISION 4	0.159	-0.061	0.049	0.010	0.152	0.420	-0.166
	VISION 6							
VISION I	VISION 1	0.004	0.174	-0.168	-0.032	0.058	0.395	-0.165
	VISION 2							
FAM II	FAM 3	-0.052	0.064	0.074	0.141	-0.027	0.026	-0.732
	FAM 4							
FAM I	FAM 1	-0.019	0.121	-0.020	-0.040	0.108	0.047	-0.696
	FAM 2							
FAM III	FAM 5	0.089	0.209	-0.077	0.038	0.041	0.085	-0.661
	FAM 7							

7.4.2.1 Customer focus

Three parcels were originally developed to measure *Customer focus*; they were CUSTOM I, CUSTOM II and CUSTOM III. All these parcels loaded together onto one construct as expected. Factor loadings between 0.744 and 0.678 were returned for all the parcels and *Customer focus* explained 4.53% of the variance in the data (Table 7.7). A Cronbach's alpha coefficient of 0.823 was returned for this construct. Enough evidence of validity and reliability is therefore provided for the scale measuring this factor. For the purpose of this study, *Customer focus* refers to the fact that the business's objectives are driven primarily by customer satisfaction, its strategy for competitive advantage is based on an understanding of customer needs, customer satisfaction is monitored by both the business and its employees and by the customer whose inputs influence business decisions.

Table 7.7: Validity and Reliability of Customer focus

% of Variance: 4.53			Cronbach's alpha: 0.823		
Parcels	Items		Factor loading	Item-total correl.	Cronbach's alpha after deletion
CUSTOM III	CUSTOM 4	Our business objectives are driven primarily by customer satisfaction	0.744	0.693	0.741
	CUSTOM 5	Our business strategy for competitive advantage is based on an understanding of our customers' needs			
CUSTOM II	CUSTOM 2	I constantly monitor my level of commitment and orientation to serving customer needs	0.699	0.710	0.722
	CUSTOM 6	In this business customer satisfaction is measured systematically and frequently			
CUSTOM I	CUSTOM 1	Customer input directly influences my business decisions	0.678	0.638	0.800
	CUSTOM 3	Customer comments and recommendations often lead to changes in the business			

7.4.2.2 Capacity development

Three parcels, namely CAPA I, CAPA II and CAPA III, were developed to measure *Capacity development*. All the parcels loaded as expected (Table 7.8). *Capacity development* explained 3.39% of the variance in the data and factor loadings between 0.711 and 0.466 were returned for this factor. A Cronbach's alpha coefficient of 0.776 was returned for *Capacity development*, which is greater than the lower limit of 0.70. Satisfactory evidence of discriminant validity and reliability is therefore provided. For the purpose of this study, *Capacity development* describes the situation where the business constantly invests in the development of employees' skills in the form of internal and external training in order to remain

competitive and meet current business needs. In addition, it also refers to measuring the gap between an employee's current and expected performance, as well as the time and resources spent on training.

Table 7.8: Validity and Reliability of Capacity development

% of Variance: 3.39			Cronbach's alpha: 0.776		
Parcels	Items		Factor loading	Item-total correl.	Cronbach's alpha after deletion
CAPA III	CAPA 5	I often receive internal training	0.711	0.562	0.770
	CAPA 6	I often receive external training			
CAPA I	CAPA 1	In this business there is continuous investment in the improvement of my skills	0.507	0.677	0.633
	CAPA 2	In this business my capabilities are viewed as an important source of a competitive advantage			
CAPA II	CAPA 3	In this business gaps between my current and expected performance are measured	0.466	0.616	0.697
	CAPA 4	In this business the result of the time and resources spent on my training are measured			

7.4.2.3 Artefacts and symbols

Out of the seven parcels originally developed to measure *Artefacts and symbols* (ART I, ART II, ART III, ART IV, ART V, ART VI and ART VII), only three parcels loaded as expected, namely ART I, ART II and ART III. The parcels ART IV, ART V, ART VI and ART VII did not load onto any factor. From Table 7.9, it can be observed that factor loading for this construct ranges between -0.784 and -0.648. *Artefacts and symbols* explained 4.98% of the variance in the data. Sufficient evidence of the discriminant validity is therefore provided. Cronbach's alpha coefficient of 0.860 was

returned for this factor. Satisfactory evidence of reliability is thus provided. For the purpose of this study, *Artefacts and Symbols* refer to what an individual can feel, hear and see when walking into a business, such as the physical environment that encourages productivity, creativity and exchange of ideas, as well as areas where employees can eat meals and interact socially.

Table 7.9: Validity and Reliability of Artefacts and symbols

% of Variance: 4.98			Cronbach's alpha: 0.860		
Parcels	Items		Factor loading	Item-total correl.	Cronbach's alpha after deletion
ART III	ART 5	The furniture in this business encourages my creativity	-0.784	0.815	0.726
	ART 7	In this business, the physical environment (e.g. chairs, structure of offices and architecture) encourages open communication among employees			
ART I	ART 1	In this business, the physical environment (e.g. chairs, structure of offices and architecture) encourages me to be productive	-0.735	0.705	0.839
	ART 2	In this business, the physical environment (e.g. chairs, structure of offices and architecture) is conducive to my creativity			
ART II	ART 3	The physical environment in this business encourages me to exchange ideas	-0.648	0.711	0.836
	ART 4	In this business there are restaurants or other areas where I can eat meals and/or interact socially			

7.4.2.4 Creating change

Three parcels were originally developed to measure *Creating change*, namely CHANGE I, CHANGE II and CHANGE III. As a result of the Exploratory Factor Analysis, all the parcels loaded together as expected, except for CHANGE III that did not load onto any factor. Additionally, the parcel EMPOWR III, initially developed to measure *Empowerment*, as well as the parcel LEARN I, initially developed to measure *Organisational learning*, also loaded onto this construct. Nevertheless the name *Creating change* was retained.

From Table 7.10, it can be seen that factor loadings ranging between 0.621 and 0.420 were returned for this factor and the factor explained 3.86% of the variance in the data. A Cronbach's alpha coefficient of 0.821 was returned for *Creating change*. Therefore, sufficient evidence of validity and reliability is provided for this construct. Even though the name stayed the same, the operationalisation had to be changed. Therefore, *Creating change* refers to the extent to which employees perceive that they have flexibility to do things, are encouraged to try out new ideas, respond well to competitors and changes in the business environment, improvise to solve problems when an answer is not apparent, have control over resources and can influence the way work is done, as well as the extent to which learning is important in the day-to-day work environment.

Table 7.10: Validity and Reliability of Creating Change

% of Variance: 3.86			Cronbach's alpha: 0.821		
Parcels	Items		Factor loading	Item-total correl.	Cronbach's alpha after deletion
CHANGE I	CHANGE 1	In this business, the way I do things is flexible	0.621	0.714	0.742
	CHANGE 3	In this business I am encouraged to try out new ideas			
CHANGE II	CHANGE 2	In this business I respond well to competitors and other changes in the business environment	0.582	0.682	0.774
	CHANGE 4	In this business I frequently improvise to solve problems when an answer is not apparent			
EMPOWR III	EMPOWR 4	In this business, I have control over the resources needed to accomplish my work	0.569	0.648	0.788
	EMPOWR 5	In this business, I can influence the way work is done			
LEARN I	LEARN 1	In this business learning is an important objective in my day-to-day work	0.420	0.598	0.795
	LEARN 2	In this business I try new business methods even if they may prove risky			

7.4.2.5 Team orientation

Two of the original three parcels used to measure the factor *Team orientation* loaded together (TEAM I and TEAM II). Additionally, the parcel ART IV initially developed to

measure *Artefacts and symbols* also loaded onto this construct. As for the parcel TEAM III, it did not load on any other factor. Regardless of this addition, the named *Team orientation* was retained for this construct. Table 7.11 below shows that factor loading between 0.587 and 0.480 was returned for this factor and *Team orientation* explained 3.40% of the variance in the data. This variance was low due to the use of Item parcelling, however it was considered significant for this study. Therefore, enough evidence of validity is reported for this factor. The Cronbach's alpha coefficient of Team orientation was 0.689. This Cronbach's alpha coefficient is close enough to the lower limit of 0.70, therefore the construct can be considered as reliable. For the purpose of this study, *Team orientation* is therefore defined as the extent to which employees feel that they work as part of a team, that cooperation across different parts of the organisation is encouraged, that teams are rewarded for their achievement as a team, as well as the availability of sport facilities and rooms to relax in.

Table 7.11: Validity and Reliability of Team orientation

% of Variance: 3.40			Cronbach's alpha: 0.689		
Parcels	Items		Factor loading	Item-total correl.	Cronbach's alpha after deletion
TEAM I	TEAM 1	In this business I work like I am part of a team	0.587	0.588	0.562
	TEAM 3	In this business teams are used to get work done			
TEAM II	TEAM 2	In this business cooperation across different parts of the organisation is actively encouraged	0.520	0.589	0.504
	TEAM 6	In this business teams are rewarded for their achievement as a team			
ART 4	ART 6	In this business there are rooms where I can relax	0.480	0.451	0.776
	ART 9	In this business there are sport			

		or gym facilities			
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7.4.2.6 Strategic direction and intent

Both parcels used to measure the factor *Mission* loaded together as expected (MISSN I and MISSN II). In addition the parcels VISION I and VISION III initially developed to measure *Vision* also loaded on this factor. Furthermore, the parcels GOALS I and GOALS II also loaded on this construct. VISION II did not load on any factor. Due to the addition of the parcels VISION I, VISION III, GOALS I and GOALS II, the factor will be renamed *Strategic direction and intent*. Table 7.12 below shows that factor loadings between 0.631 and 0.395 were reported for this construct, and *Strategic direction and intent* explained 4.50% of the total variance of the data. The Cronbach's alpha coefficient of *Strategic direction and intent* was 0.900, which is significantly greater than the lower limit of 0.70. Therefore, satisfactory evidence of validity and reliability are reported for this factor. In this study, *Strategic direction and intent* refers to the extent to which the business has a clear strategic direction, leaders set clear goals and ambitions, there is a long-term purpose and direction for the business, and progress is measured against the goals set.

Table 7.12: Validity and Reliability of Strategic direction and intent

% of Variance: 4.50			Cronbach's alpha: 0.900		
Parcels	Items		Factor loading	Item-total correl.	Cronbach's alpha after deletion
MISSN II	MISSN 3	The strategy of this business leads other organisations to change the way they compete in the industry	0.631	0.757	0.882
	MISSN 4	In this business there is a clear strategy for the future			
	MISSN 5	The strategic direction of our business is clear. (R)			

**Table 7.12: Validity and Reliability of Strategic direction and intent
(continued)**

GOALS II	GOALS 3	Work is organised so that I can see the relationship between my job and the goals of the organisation	0.563	0.815	0.872
	GOALS 5	In this business leaders set goals that are ambitious, but realistic			
MISSN I	MISSN 1	In this business I have a long-term purpose and direction	0.506	0.755	0.878
	MISSN 2	In this business there is a clear mission that gives meaning and direction to my work			
GOALS I	GOALS 1	In this business my progress is measured against stated goals	0.484	0.682	0.892
	GOALS 2	In this business I understand what needs to be done			
	GOALS 4	In this business there is widespread agreement about goals to be achieved			
VISION III	VISION 4	The employees in this business have a shared vision of what the organisation will be like in the future	0.420	0.753	0.881
	VISION 6	In this business alignment of vision is built across different levels and project teams			
VISION I	VISION 1	The vision of our business creates excitement and motivation for me	0.395	0.698	0.889
	VISION 2	In this business I am able to meet short-term demands without compromising our long-term vision			

7.4.2.7 Family orientation and atmosphere

Three parcels were developed to measure the factor *Family orientation and atmosphere*, namely FAM I, FAM II and FAM III. All these parcels loaded together as expected. From Table 7.13 below, it can be seen that factor loadings between -0.732 and -0.661 were reported. *Family orientation and atmosphere* explained 5.32% of the total variance in the data. The reported Cronbach's alpha coefficient for this factor is 0.884. Therefore, sufficient evidence of the validity and reliability is reported for this factor. The operationalisation of *Family orientation and atmosphere* remains unchanged and for the purpose of this study refers to the extent to which supervisors are encouraged to be sensitive to employees' non-work needs, employees are treated as total persons and the business has a real interest in employees' welfare. It also incorporates the extent to which a unique family atmosphere is created in the business where dedication and loyalty are emphasised.

Table 7.13: Validity and Reliability of Family orientation and atmosphere

% of Variance: 5.32			Cronbach's alpha: 0.884		
Parcels	Items		Factor loading	Item-total correl.	Cronbach's alpha after deletion
FAM II	FAM 3	Management in this business encourage supervisors to be sensitive to my personal concerns	-0.732	0.812	0.818
	FAM 4	In general, managers in this business are accommodating of my non-work needs			
FAM I	FAM 1	In this business I am treated as a total person	-0.696	0.792	0.834
	FAM 2	This business has a real interest in my welfare.			

Table 7.13: Validity and Reliability of Family orientation and atmosphere (continued)

FAM III	FAM 5	This business tries to create a unique family atmosphere	-0.661	0.794	0.863
	FAM 6	In this business loyalty and dedication are emphasised			
	FAM 7	Managers in this business are sympathetic towards employees' childcare responsibilities			

7.5 REVISED HYPOTHESISED MODEL AND HYPOTHESES

Initially, thirteen independent variables were developed to measure *Happiness*. Nevertheless, after conducting the Exploratory Factor Analysis, only seven independent variables were extracted. These variables are *Customer focus*, *Capacity development*, *Artefacts and symbols*, *Creating change*, *Team orientation*, *Strategic direction and intent* and *Family orientation and atmosphere*. The mediating variable and the dependent variable were not affected. The operationalisation of some factors was modified based on the Exploratory Factor Analysis and the theoretical model of the study illustrated in Figure 1.2 was revised (Figure 7.2) as well as the hypotheses. Table 7.14 presents a summary of the reformulated operational definitions and the reformulated hypotheses are elaborated in Figure 7.2.

Table 7.14: Reformulated operational definitions

Factor	Operationalisation
<i>Happiness</i>	Refers to the extent to which a person perceives the overall quality of his/her life as enjoyable. In other words, it refers to the extent to which a person is happy, satisfied with his/her life, feels comfortable with himself/herself, perceives the world as a good place and looks at the bright side of life.
<i>Job Satisfaction</i>	Describes the extent to which an individual experiences his/her involvement in the business as rewarding, fulfilling, enjoyable and satisfactory. It also refers to employees being satisfied with the way in which employees work together in the business.
<i>Creating change</i>	Refers to the extent to which employees perceive that they have flexibility in doing things, are encouraged to try out new ideas, respond well to competitors and changes in the business environment, improvise to solve problems when an answer is not apparent, have control over resources and can influence the way work is done, as well as the extent to which learning is important in the day-to-day work environment.
<i>Customer focus</i>	Refers to the fact that the business's objectives are driven primarily by customer satisfaction, its strategy for competitive advantage is based on an understanding of customer needs, customer satisfaction is monitored by both the business and its employees and customer inputs influence business decisions.
<i>Strategic direction and intent</i>	Refers to the extent to which the business has a clear strategic direction, leaders set clear goals and ambitions, there is a long-term purpose and direction for the business, and progress is measured against the goals set.
<i>Team orientation</i>	Refers to the extent to which employees feel that they work as part of a team, that cooperation across different parts of the organisation is encouraged, that teams are rewarded for their achievement as a team, as well as the availability of rooms to relax and sport facilities.

Table 7.14: Reformulated operational definitions (continued)

<i>Capacity development</i>	Describes the situation where the business constantly invests in the development of employees' skills in the form of internal and external training in order to remain competitive and meet current business needs. In addition, it also refers to measuring the gap between an employee's current and expected performance, as well as time and resources spent on training.
<i>Family orientation and atmosphere</i>	Refers to the extent to which supervisors are encouraged to be sensitive to employees' non-work needs, employees are treated as total persons and the business has a real interest in employees' welfare. It also incorporates the extent to which a unique family atmosphere is created in the business where dedication and loyalty is emphasised.
<i>Artefacts and symbols</i>	Refer to what an individual can feel, hear and see when walking into a business, such as the physical environment that encourages productivity, creativity and exchange of ideas, as well as areas where employees can eat meals and interact socially.

As elaborated in Figure 7.2 below, it can be observed that numerous variables were eliminated from the hypothesised model of the study. The following are the reformulated hypotheses:

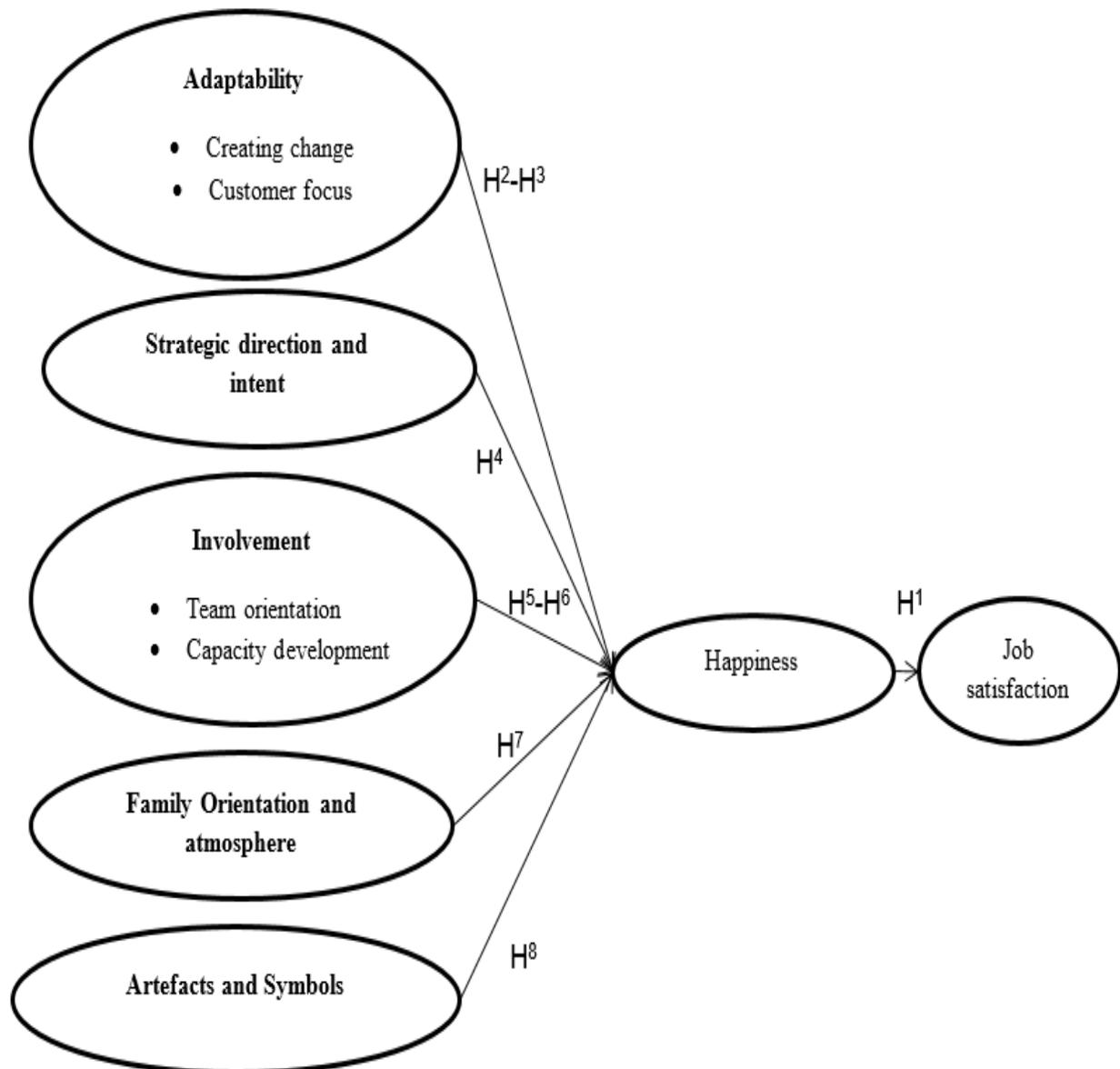
- H¹: There is a positive relationship between *Happiness* and *Job Satisfaction*
- H²: There is a positive relationship between *Creating change* and the *Happiness* of ICT employees.
- H³: There is a positive relationship between *Customer focus* and the *Happiness* of ICT employees.
- H⁴: There is a positive relationship between *Strategic direction and intent* and the *Happiness* of ICT employees.
- H⁵: There is a positive relationship between *Team Orientation* and the *Happiness* of ICT employees.

H⁶: There is a positive relationship between *Capacity development* and the *Happiness* of ICT employees.

H⁷: There is a positive relationship between *Family Orientation and Atmosphere* and the *Happiness* of ICT employees.

H⁸: There is a positive relationship between *Artefacts and Symbols* and the *Happiness* of ICT employees.

Figure 7.2: Revised hypothesised model: The influence of organisational culture on the happiness of employees in the ICT industry



7.6 DESCRIPTIVE STATISTICS

Descriptive statistics were calculated with the aim of summarising and describing the sample data. These descriptive statistics comprise the means, standard deviation and frequency distribution. A 7 point Likert-type interval was used to assess the extent to which the respondents agreed with the statements. For curtness and concision, the frequency distribution response categories were regrouped under three categories. “Strongly disagree” and “Disagree” are grouped as “Disagree”. In a similar way, “Somewhat disagree”, “Neutral” and “Somewhat agree” are grouped as “Neutral”. The last category is named “Agree” and regroups frequency distribution responses of “Agree” and “Strongly Agree”. Table 7.15 below gives a summary of these various descriptive statistics and succeeding sections will discuss these results in more detail.

Table 7.15: Descriptive statistics

Factors	Mean	Std. Dev.	Disagree	Neutral	Agree
Job satisfaction	5.291	1.006	4.14	34.20	61.66
Happiness	5.103	1.006	3.63	40.93	55.44
Customer focus	5.402	0.985	2.07	34.71	63.21
Capacity development	4.263	1.165	15.03	59.59	25.39
Artefacts and symbols	5.131	1.127	3.63	43.52	52.85
Creating change	5.102	0.914	2.07	40.93	56.99
Team orientation	5.051	1.144	6.74	38.34	54.92
Strategic direction and intent	4.897	1.014	3.63	47.15	49.22
Family orientation and atmosphere	5.298	1.238	4.66	31.61	63.73

A mean score of 5.291 was reported for the dependent variable in this study, *Job satisfaction*. The majority of respondents (61.66%) are in agreement that they have job satisfaction. Only 4.14% of the respondents claimed being dissatisfied with their job, whereas the rest (34.20%) were neutral about the question.

A mean score of 5.103 was reported for *Happiness*, the mediating variable in this study. About half of the respondents (55.44%) agreed that they were happy. Only 3.63% of the respondents stated that they were not happy with their lives, while the rest of the respondents (40.93%) stayed neutral.

With regard to the independent variable, a mean score of 5.402 was reported for *Customer focus*. The majority of respondents (63.21%) agreed with the statements measuring *Customer focus*. Only 2.07% disagreed with the fact that the ICT business they are working for knows and reacts to customers' needs, while the rest of respondents (34.71%) were neutral regarding the question.

A mean score of 4.263 was reported for *Capacity development*. More than the half of the respondents (59.59%) were neutral to the statements measuring *Capacity development*, whereas 25.39 % of them agreed that the ICT business they are working for constantly invests in the development of employees' skills. The remaining respondents (15.93%) reported that *Capacity development* was not taken into account in the ICT business they are working for.

Concerning *Artefacts and symbols*, a mean score of 5.131 was reported. About half of respondents (52.85%) agreed with the statements measuring what an individual can feel, hear and see when walking into a business. Only 3.63% of the respondents disagreed with the statements measuring *Artefacts and symbols*, whereas 43.52% were neutral about the question.

The next independent variable is *Creating change*, for which a mean score of 5.102 was reported. Only 2.07% of the respondents thought that they cannot change the way things are done in the ICT business. A little more than the half of respondents (56.99%) agreed with the statements measuring *Creating change*, while 40.93% of the respondents were neutral.

A mean score of 5.051 was reported for *Team orientation*. About half of the respondents (54.92%) agreed with the statements measuring the extent to which employees feel that they work as part of a team, that cooperation across different parts of the organisation is encouraged, that teams are rewarded for their achievement as a team, as well as the availability of rooms to relax and sport

facilities. Only 6.74% disagreed with these statements and 38.34% of the respondents were neutral regarding the question.

A mean score of 4.897 was reported for *Strategic direction and intent*. Almost half of the respondents (49.22%) agreed that there is a clear strategy that gives purpose, meaning and direction to the ICT business they are working for, whereas only 3.63% suggested the contrary. Almost half of the respondents (47.15%) were neutral regarding the statements measuring this variable.

Family orientation and atmosphere is the last independent variable. A mean score of 5.298 was reported for this variable and only 4.66% of the respondents disagreed with the fact that the ICT business where they are working is people-oriented and view each employee as total persons. The majority of the respondents (63.73%) agreed that the ICT business was people-oriented, while the rest (31.61%) stayed neutral about the different questions.

7.7 PEARSON'S CORRELATION COEFFICIENTS

The degree of correlation or association between different variables investigated in this study was assessed using Pearson's correlation coefficients. Table 7.16 below presents the calculated Pearson's correlation coefficients for different variables.

Table 7.16: Pearson's correlation coefficients

Factors	1	2	3	4	5	6	7	8	9
1 Job satisfaction	1.000	0.609	0.417	0.613	0.504	0.599	0.437	0.750	0.678
2 Happiness	0.609	1.000	0.365	0.339	0.344	0.439	0.256	0.487	0.427
3 Customer focus	0.417	0.365	1.000	0.192	-0.216	0.214	0.219	0.321	-0.106
4 Capacity development	0.613	0.339	0.192	1.000	-0.151	0.174	0.132	0.277	-0.347
5 Artefacts and symbols	0.504	0.344	-0.216	-0.151	1.000	-0.263	-0.421	-0.216	0.365
6 Creating change	0.599	0.439	0.214	0.174	-0.263	1.000	0.210	0.377	-0.331

Table 7.16: Pearson's correlation coefficients (continued)

7 Team Orientation	0.437	0.256	0.219	0.132	-0.421	0.210	1.000	0.273	-0.179
8 Strategic direction and intent	0.750	0.487	0.321	0.277	-0.216	0.377	0.273	1.000	-0.358
9 Family Orientation and atmosphere	0.678	0.427	-0.106	-0.347	0.365	-0.331	-0.179	-0.358	1.000

(p < 0.05)

Job satisfaction is correlated to all the other variables. In this study, significant ($p < 0.05$) positive correlations are reported between *Job satisfaction* and the following constructs, namely *Happiness* ($r = 0.609$), *Customer focus* ($r = 0.417$), *Capacity development* ($r = 0.613$), *Artefacts and symbols* ($r = 0.504$), *Creating change* ($r = 0.599$), *Team orientation* ($r = 0.437$), *Strategic direction and intent* ($r = 0.750$) and *Family orientation and atmosphere* ($r = 0.678$).

In a similar way, significant ($p < 0.05$) positive correlations are reported between *Happiness* and *Customer focus* ($r = 0.365$), *Capacity development* ($r = 0.339$), *Artefacts and symbols* ($r = 0.344$), *Creating change* ($r = 0.439$), *Team orientation* ($r = 0.256$), *Strategic direction and intent* ($r = 0.487$) and *Family orientation and atmosphere* ($r = 0.427$). Even though the correlation between *Happiness* and *Team orientation* is significant ($p < 0.05$), the reported r -value is less than 0.3 (0.256), which reveals little or no association between these factors (Garcia 2010: 9).

Significant ($p < 0.05$) positive correlations are also reported between *Customer focus* and *Capacity development* ($r = 0.192$), *Creating change* ($r = 0.214$), *Team orientation* ($r = 0.219$) and *Strategic direction and intent* ($r = 0.321$). Since the reported r -values of *Capacity development*, *Creating change* and *Team orientation* are less than 0.3, it can be concluded, following Garcia (2010: 9), that there is little or no association between these constructs and *Customer focus*. On the other hand, significant negative correlations ($p < 0.05$) were reported between *Customer focus* and *Artefacts and symbols* ($r = -0.216$) as well as between *Customer focus* and *Family orientation and atmosphere* ($r = -0.106$). However, the smallness of the r -

value ($r < 0.3$) suggests little or no association between these factors and *Customer focus* (Garcia 2010: 9).

With regard to *Capacity development*, significant positive correlations ($p < 0.05$) are reported with *Creating change* ($r = 0.174$), *Team orientation* ($r = 0.132$) and *Strategic direction and intent* ($r = 0.277$). All the reported r -values are lower than 0.3, thus providing evidence of little or no correlation between these factors and *Capacity development* (Garcia 2010: 9). Significant ($p < 0.05$) negative correlations are reported between *Capacity development* and *Artefacts and symbols* ($r = -0.151$) and between *Capacity development* and *Family orientation and atmosphere* ($r = -0.347$).

In addition, a weak, significant ($p < 0.05$) positive correlation was reported between *Artefacts and symbols* and *Family Orientation and atmosphere* ($r = 0.365$). On the other hand, a significant ($p < 0.05$) negative correlation is reported between *Artefacts and symbols* and *Creating change* ($r = -0.263$), *Team orientation* ($r = -0.421$) and *Strategic direction and intent* ($r = -0.216$). But, due to the smallness of the reported r -values of *Creating change* and *Strategic direction and intent*, little or no association with *Artefacts and symbols* is suggested (Garcia 2010: 9).

A significant ($p < 0.05$) positive correlation was reported between *Creating change* and *Team orientation* ($r = 0.210$) as well as between *Creating change* and *Strategic direction and intent* ($r = 0.377$). There is nevertheless little or no association between *Creating change* and *Team orientation* since the reported r -value is less than 0.3 (Garcia 2010: 9). A significant ($p < 0.05$) weak negative correlation was reported between *Creating change* and *Family orientation and atmosphere* ($r = -0.331$).

Concerning *Team orientation*, a significant ($p < 0.05$) positive correlation was reported with *Strategic direction and intent* ($r = 0.273$). However, the value of the reported r -value ($r < 0.3$) suggests small or no association between these constructs (Garcia 2010: 9). On the other hand, a significant ($p < 0.05$) negative correlation was reported between *Team orientation* and *Family orientation and atmosphere* ($r = -0.179$). Then again, the small value of the reported r -value implies little or no association between these two factors (Garcia 2010: 9).

Finally, a significant ($p < 0.05$) negative correlation is reported between *Strategic direction and intent* and *Family orientation and atmosphere* ($r = -0.358$). Since the

reported *r*-value is lower than -0.3, it can be concluded *that* there is a weak negative association between those two constructs (Garcia 2010: 9).

7.8 RESULTS OF THE MULTIPLE REGRESSION ANALYSES

In order to assess the influence of the independent variables on the mediating variable, *Happiness* and the influence of the mediating variable on the dependent variable, *Job satisfaction*, Multiple Regression Analyses were undertaken. The different regression analyses are discussed in the subsequent sub-sections.

7.8.1 MULTIPLE REGRESSION ANALYSIS: THE INFLUENCE OF HAPPINESS ON JOB SATISFACTION

The result of the Multiple Regression Analysis demonstrated that *Happiness* explained 36.50% of the variance in *Job satisfaction*. Table 7.17 reveals a significant (10.478; $p < 0.001$) positive relationship between the mediating variable *Happiness* and the dependent variable *Job satisfaction*. This suggests that the more employees perceive the overall quality of their lives as enjoyable, the extent to which they are happy, satisfied with their lives, feel comfortable with themselves, perceive the world as a good place and look at the bright side of their lives, the more likely they are to experience their involvement in the business as rewarding, fulfilling, enjoyable and satisfactory, as well as the more likely they are to be satisfied with the way in which they work together in the business. The findings of this study concur with those of Eddington and Shuman (2008: 5) as well as Boehm and Lyubomirsky (2008 110), who also reported that people, pleased with their lives, usually find more satisfaction in their jobs. Based on this finding, hypothesis H¹ is accepted.

Table 7.17: The influence of Happiness on Job satisfaction

Dependent variable: Job satisfaction		R-Square = 0.3650	
Mediating Variable	Beta	t-value	Sig.(p)
Happiness	0.7360	10.4781	0.0000***

(*p < 0.05; **p < 0.01; ***p < 0.001)

7.8.2 MULTIPLE REGRESSION ANALYSIS: THE INFLUENCE OF INDEPENDENT FACTORS ON HAPPINESS

The independent variables explained 29.29% of the variance in *Happiness*. The result of the Multiple Regression Analysis was reported on a 5% ($p < 0.05$) and 10% ($p < 0.1$) level. Table 7.18 reported the multiple regressions at both levels of significance ($p < 0.05$; $p < 0.1$).

Table 7.18: Influence of independent variables on Happiness

Mediating variable: Perceived happiness		R-Square = 0.2929	
Independent variables	Beta	t-value	Sig.(p)
Customer focus	0.13141	1.67624	0.09538**
Capacity development	-0.03757	-0.50766	0.61230
Artefacts and symbols	0.10106	1.29073	0.19840
Creating change	0.14487	1.48426	0.13944
Team Orientation	-0.10369	-1.35996	0.17550
Strategic direction and intent	0.25389	2.50453	0.01312*
Family orientation and atmosphere	0.13860	1.89023	0.06020**

(* $p < 0.05$; ** $p < 0.1$)

From this table, it can be seen that there is only one significant positive relationship at a 5 % level of significance (2.505; $p < 0.05$), which is between *Strategic direction and intent* and *Happiness*. The extent to which the business has a clear strategic direction; leaders set clear goals and ambitions; there is a long-term purpose and direction for the ICT business; and progress is measured against the goals set, is therefore a strong explanatory factor of employees' happiness. These results confirmed those of Slyck (2013), Chaiprasit and Santidhirakul (2011: 190) and Fisher (2010: 30) that in order to increase employees' happiness, top management people should frequently communicate the long-term vision and make sure that employees share common goals and mission. *Strategic direction and intent* is also

positively related to *Happiness* at a 10% level of significance (2.505; $p < 0.1$). Based on these findings, H^4 is accepted.

At a 10 % level of significance ($p < 0.1$), three factors are positively related to *Happiness*, namely, *Customer focus* (1.676; $p < 0.1$), *Strategic direction and intent* (2.505; $p < 0.1$) and *Family orientation and atmosphere* (1.890; $p < 0.1$). Table 7.18 shows a positive relationship between *Customer focus* and *Happiness* (1.676; $p < 0.1$). These results imply that the more the ICT business's objectives are driven primarily by customer satisfaction; its strategy for competitive advantage is based on an understanding of customers' needs; customer satisfaction is monitored by both the business and its employees; and customer inputs influence business decisions; the more happy employees are likely to be. These findings concur with those of Gillespie, Denison, Haaland, Smerek and Neale (2007: 2) and Google (2013) that argue that in today's competitive business environment, satisfying customers represents a significant component of employees' happiness. Therefore, hypothesis H^3 is accepted.

The result of the multiple regressions analysis reported a positive relationship between *Family orientation and atmosphere* and *Happiness* (1.890; $P < 0.1$). This result is supported by Chairpravit and Santidhirakul (2011: 198), who also reported that the extent to which supervisors are encouraged to be sensitive to employees' non-work needs and they treat employees as total persons, increases the happiness of employees. Based on these results, hypothesis H^7 is accepted.

As illustrated in Table 7.18, no relationship was found between *Capacity development* and *Happiness* (-0.508; $p > 0.05$; $p > 0.1$). These findings suggests that the respondents of this study believed that whether the business constantly invests in the development of employees' skills, in the form of internal and external training, in order to remain competitive and meet current business needs; as well as measure the gap between an employee's current and expected performance; and time and resources spent on training, have no influence on their happiness. These results are in contrast with those of Chatterjee (2012) who found support that employees' happiness at Google is maintained by special perks that include opportunities to learn and grow. Based on these findings, hypothesis H^6 is rejected.

The results of the Multiple Regression Analysis demonstrated that there is no significant relationship in this study between *Artefacts and Symbols* and *Happiness* (1.291; $p > 0.05$; $p > 0.1$). In other words, the respondents of this study thought that what they can feel, hear and see when walking into the business in which they are working, such as the physical environment that encourages productivity, creativity and ideas exchange, as well as areas where they can eat meals and interact socially, have no influence on their happiness. Based on this finding, hypothesis H⁸ is therefore rejected. These results are different from those of Chatterjee (2012) and Johansson (2012) that argue that ICT employees' happiness depends mostly on the artefacts of the business.

Table 7.18 shows no significant relationship (1.484; $p > 0.05$; $p > 0.1$) between *Creating change* and *Happiness*. The extent to which employees perceive that they have flexibility in doing things; are encouraged to try out new ideas; respond well to competitors and changes in the business environment; improvise to solve problems when an answer is not apparent; have control over resources and can influence the way work is done; as well as the extent to which learning is important in the day-to-day work environment has no influence on the ICT employees' happiness. These findings are in contrast with those of Amadile and Kramer (2012) which support that employees feel happier when their business is able to adapt to a change in the environment. Thus, hypothesis H² is rejected.

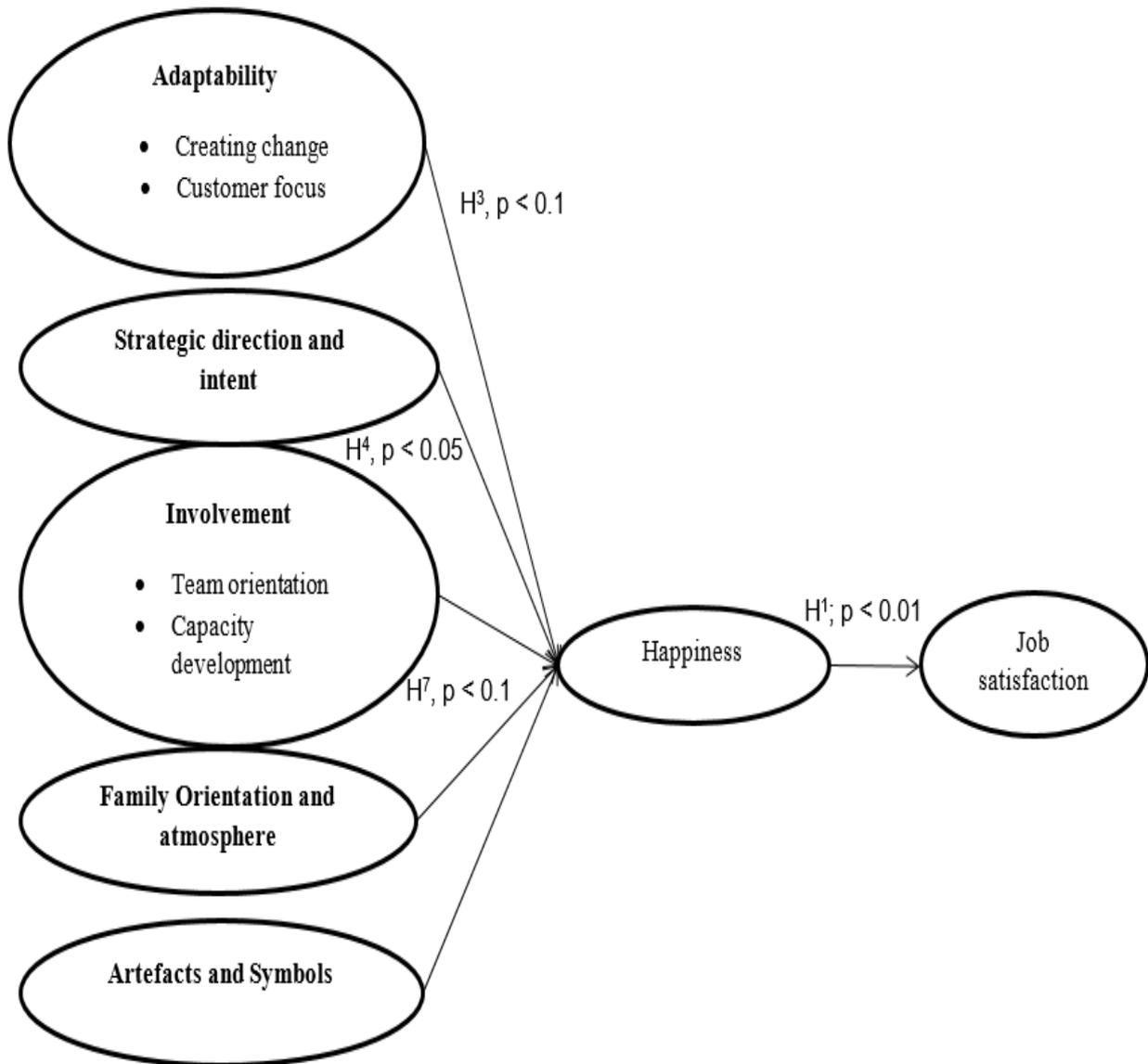
Finally, the Multiple Regression Analysis illustrated in Table 7.18 demonstrated that no significant relationship (-1.360; $p > 0.05$; $p > 0.1$) was found between *Team orientation* and *Happiness*. For the respondents of this study, the extent to which employees feel that they work as part of a team, that cooperation across different parts of the organisation is encouraged, that teams are rewarded for their achievement as a team, as well as the availability of rooms to relax in and sport facilities have no influence on their happiness. These findings contradict McCarthy, Almeida and Ahrens (2011: 5) and Graham and Shier (2010: 1564) who found that team orientation is positively correlated to employees' happiness. Therefore, hypothesis H⁵ is rejected. Table 7.19 below summarises the accepted and rejected hypotheses.

Table 7.19: Summary of accepted hypotheses

Hypotheses	wording	Status
H ¹	There is a positive relationship between <i>Happiness</i> and <i>Job Satisfaction</i>	Accepted
H ²	There is a positive relationship between <i>Creating change</i> and the <i>Happiness</i> of ICT employees.	Rejected
H ³	There is a positive relationship between <i>Customer focus</i> and the <i>Happiness</i> of ICT employees.	Accepted
H ⁴	There is a positive relationship between <i>Strategic direction and intent</i> and the <i>Happiness</i> of ICT employees.	Accepted
H ⁵	There is a positive relationship between <i>Team Orientation</i> and the <i>Happiness</i> of ICT employees.	Rejected
H ⁶	There is a positive relationship between <i>Capacity development</i> and the <i>Happiness</i> of ICT employees.	Rejected
H ⁷	There is a positive relationship between <i>Family Orientation and Atmosphere</i> and the <i>Happiness</i> of ICT employees.	Accepted
H ⁸	There is a positive relationship between <i>Artefacts and Symbols</i> and the <i>Happiness</i> of ICT employees.	Rejected

As a result of the Multiple Regression Analysis, three factors have been identified as having a significant influence on the happiness of employees working in the ICT industry. In a similar way, a significant positive relationship was found between the mediating variable *Happiness* and the *dependent variable* Job satisfaction. These significant relationships are summarised in Figure 7.3.

Figure 7.3: Summary of significant relationships



7.9 AN ANALYSIS OF THE INFLUENCE OF DEMOGRAPHIC DATA ON FACTORS INVESTIGATED

The primary objective of this study was to empirically test the influence of various components of organisational culture on *Happiness* and the influence of *Happiness* on the *job satisfaction* of ICT employees in South Africa, and an analysis was conducted to evaluate the influence of selected demographic variables on the dependent, mediating and independent variables investigated. For this purpose, an Analysis of Variance (ANOVA) was undertaken and the findings thereof will be discussed in the subsequent sub-sections.

7.9.1 RESULTS OF THE ANALYSIS OF VARIANCE

In the previous section concerning the measuring instrument, demographic information was required from the participants. This comprised information relating to the *Gender*, *Age group*, and *Population group* of the respondents. Additionally, information concerning the *Years of service* was also required. An ANOVA was undertaken in order to decide whether relationships exist between the various factors under investigation and these selected demographic variables. The Bonferroni post-hoc test was calculated in order to establish significant differences between the individual mean score. The results of this analysis are discussed below.

7.9.1.1 Demographic variables and the mediating variable Happiness

Based on the ANOVA test, a significant positive ($p < 0.001$) relationship was reported between the demographic variable *Population group* and *Happiness* (Table 7.20). The Bonferroni post-hoc test ($p < 0.01$) revealed that Coloured respondents ($\bar{x} = 5.615$), Asian respondents ($\bar{x} = 5.331$) and White respondents ($\bar{x} = 5.149$) scored significantly higher mean scores for *Happiness* than the respondents under the population group Other ($\bar{x} = 3.796$) did.

No significant positive relationship ($p > 0.05$) was reported between *Gender* and *Happiness*. These results confirmed those of Dolan, Peasgood and White (2008: 99). However, Graham and Chattopadhyay (2012: 3) as well as Frey and Stutzer (2010: 55) argue that women have been demonstrated to be happier in comparison to men, even if the difference is small.

Similarly, no significant positive relationship ($p > 0.05$) was found between *Age group* and *Happiness*. These results are consistent with those of Diener, Sandvik, Seidlitz and Diener (1993: 195-223) who support that age is not significant in determining happiness as people adapt their objectives as they grow older. Nevertheless, these findings contradict those of Blanchflower and Oswald (2008: 1733-1749) who found a U-shaped relationship between happiness and age. Additionally, no significant relationship ($p < 0.05$) was reported between *Years of service* and *Happiness*.

Table 7.20: Demographic variables and Happiness

Mediating variable: Perceived happiness		
Demographic variables	F-value	Sig.(p)
Gender	1.426	0.2341
Population group	5.309	0.0004***
Age group	1.602	0.1751
Years of service	1.834	0.1086

(*p < 0.05; **p < 0.01; ***p < 0.001)

The null-hypothesis stating that there is no relationship between the demographic variables and *Happiness* is accepted for *Gender*, *Age group* and *Years of service* but not for *Population group*.

7.9.1.2 Demographic variables and the dependent variable Job satisfaction

In Table 7.21 below, results of the ANOVA test between the dependent variable *Job satisfaction*, and demographic variables are presented. No significant positive ($p > 0.05$) relationship was found between *Job satisfaction* and any of the demographic variables. Therefore the Bonferroni post-hoc test was not calculated for this factor.

No significant positive relationship ($p > 0.05$) was found between *Gender* and *Job satisfaction*. These findings are in contrast with those of Crossman and Zaki (2003: 368-376) who argue that female employees are more satisfied with their jobs than their male counterparts. Graham and Messner (1998: 196-202) also contradict the results of this study. They found that males in the USA were more satisfied with their jobs than females.

The results of the ANOVA test also found no significant positive relationship ($p > 0.05$) between *Age group* and *Job satisfaction*. These findings contradict those of Hunter (2007: 231-238) who argue that job satisfaction and age followed a U-shaped relationship. In addition, the findings of Oshagbemi and Hickson (2003: 364) that support that job satisfaction is negatively correlated with increasing age and length of service also contradict the results of this study.

Table 7.21: Demographic variables and Job satisfaction

Dependent Variable: Job satisfaction		
Demographic variables	F-value	Sig.(p)
Gender	0.014	0.9054
Population group	1.483	0.2094
Age group	0.747	0.5612
Years of service	1.997	0.0815

(*p < 0.05)

Following the above discussion, the null-hypothesis affirming that there is no relationship between demographic variables and *Job satisfaction* is accepted for all the demographic variables namely *Gender*, *Population group*, *Age group* and *Years of service*.

7.9.1.3 Demographic variables and Family orientation and atmosphere

As reported in Table 7.22, a significant positive ($p < 0.05$) relationship between *Family orientation and atmosphere* and the demographic variable *Years of service* was found. No significant positive relationship was found between *Family orientation and atmosphere* and the other demographic variables namely *Gender*, *Population group* and *Age*. The results of the Bonferroni post-hoc test reported a significant difference ($p < 0.05$) between the mean score reported by the employees who had worked in the business for less than a year ($\bar{x} = 5.874$) and those who have worked in the business between three to five years ($\bar{x} = 4.950$).

Table 7.22: Demographic variables and Family orientation and atmosphere

Independent Variable: Family orientation and atmosphere		
Demographic variables	F-value	Sig.(p)
Gender	1.985	0.1607
Population group	0.773	0.5443
Age group	1.105	0.3559
Years of service	4.196	0.0159*

(*p < 0.05)

Based on the discussion above, the null hypothesis stating that there is no relationship between demographic variables and *Family orientation and atmosphere* is therefore accepted for *Gender, Population group* and *Age group* and rejected for *Years of service*.

7.9.1.4 Demographic variables and Strategic direction and intent

The results of the ANOVA test revealed a significant positive ($p < 0.05$) relationship between *Strategic direction and intent* and *Years of service*. The Bonferroni post-hoc test ($p < 0.01$) revealed that employees that have worked for the ICT business for less than a year ($\bar{x} = 5.529$) score significantly higher mean scores than those who have worked in the ICT business between three to five years ($\bar{x} = 4.661$) and those who have worked between six to ten years ($\bar{x} = 4.562$). No significant positive ($p > 0.05$) relationship was found between *Strategic direction and intent* and the other demographic variables namely *Gender, Population group* and *Age group*.

Table 7.23: Demographic variables and Strategic direction and intent

Independent Variable: Strategic direction and intent		
Demographic variables	F-value	Sig.(p)
Gender	0.620	0.4319
Population group	2.302	0.0606
Age group	0.673	0.6116
Years of service	2.423	0.0375*

(* $p < 0.05$)

Against this previous discussion, the null-hypothesis that states that there is no relationship between demographic variables and *Strategic direction and intent* is accepted for *Gender, Population group* and *Age group*, but rejected for *Years of service*.

7.9.1.5 Demographic variables and Team orientation

Table 7.24 demonstrated that there is no significant ($p > 0.05$) relationship between *Team orientation* and all the demographic variables, except for *Age group* ($p < 0.01$). The Bonferroni post-hoc test revealed a significant difference ($p < 0.05$)

between the mean scores reported by those in the age group of 18-25 years of age ($\bar{x} = 5.610$) and those in the age group of 36-45 years of age ($\bar{x} = 4.535$), 46- 55 years of age ($\bar{x} = 4.000$) and 56 years of age and older ($\bar{x} = 4.092$). In a similar way, differences between the mean score reported by the age group of 26-35 years of age ($\bar{x} = 5.294$) and the age groups of 36-45 years of age, 46-55 years of age and 56 years of age and older were also revealed. These findings suggests that on average, employees in the age group of 18-25 years of age and in the age group of 26-35 years of age are more team- orientated than those in the age groups of 36-45, 46-55, and 56 years and older.

Table 7.24: Demographic variables and Team Orientation

Independent Variable: Team Orientation		
Demographic variables	F-value	Sig.(p)
Gender	2.493	0.1162
Population group	0.893	0.4695
Age group	4.805	0.0010**
Years of service	2.134	0.0610

(*p < 0.05; **p < 0.01)

The null-hypotheses stating that there is no relationship between demographic variables and *Team orientation* is therefore accepted for *Gender*, *Population group* and *Years of service* but not for *Age group*.

7.9.1.6 Demographic variables and Creating change

Based on Table 7.25, the results of the ANOVA test reported that there is no significant ($p > 0.05$) positive relationship between *Creating change* and all the demographic variables, namely *Gender*, *Population group*, *Age group* and *Years of service*. Based on these findings, the Bonferroni post-hoc test was not calculated for this factor.

Table 7.25: Demographic variables and Creating change

Independent Variable: Creating change		
Demographic variables	F-value	Sig.(p)
Gender	0.308	0.5796
Population group	1.338	0.2579
Age group	1.488	0.2078
Years of service	2.212	0.0553

(*p < 0.05)

The null-hypothesis stating that there is no relationship between demographic variables and Creating Change is accepted for all the demographic variables namely *Gender, Population group, Age group* and *Years of service*.

7.9.1.7 Demographic variables and Artefacts and symbols

No significant ($p > 0.05$) relationship was revealed between *Artefacts and symbols* and all the demographic variables, except for *Years of service* (Table 7.26). For *Years of service*, significant positive ($p < 0.01$) relationship was reported. The results of the Bonferroni post-hoc test reported a significant difference ($p < 0.05$) between the mean score reported by the employees who have worked in the business for less than a year ($\bar{x} = 5.936$) and those who have worked in the business between three to five years ($\bar{x} = 5.003$), between six to ten years ($\bar{x} = 4.652$) and between eleven to twenty years ($\bar{x} = 5.300$). Respondents who have worked in the ICT business for less than a year are therefore more sensitive to artefacts and symbols than respondents who have worked in the business between three to five years, six to ten years and eleven to twenty years.

Table 7.26: Demographic variables and Artefacts and symbols

Independent Variable: Artefacts and symbols		
Demographic variables	F-value	Sig.(p)
Gender	0.003	0.9562
Population group	0.198	0.9389
Age group	1.479	0.2105
Years of service	3.517	0.0047**

(*p < 0.05, **p < 0.01)

Based on the results presented above, support is reported for the null-hypothesis stating that there is no relationship between demographic variables *Gender*, *Population group* and *Age group* and the independent variable *Artefacts and symbols*. However, the null-hypothesis was rejected for the demographic variable *Years of service*.

7.9.1.8 Demographic variables and Capacity development

From Table 7.27 below, it can be observed based on the ANOVA test results no significant positive ($p > 0.05$) relationship between *Capacity development* and all the demographic variables was reported except for *Years of service*. The Bonferroni post-hoc test revealed significant ($p < 0.01$) differences in the mean scores described by employees who have worked for the ICT business for less than a year ($\bar{x} = 4.936$) versus those who have worked in the ICT business between three to five years ($\bar{x} = 4.046$) and between six to ten years ($\bar{x} = 3.924$).

Table 7.27: Demographic variables and Capacity development

Independent Variable: Capacity development		
Demographic variables	F-value	Sig.(p)
Gender	0.000	1.0000
Population group	1.335	0.2587
Age group	0.8392	0.5020
Years of service	4.3135	0.0010*

(*p < 0.05, **p < 0.01)

Following what precedes, the null-hypothesis affirming that there is no relationship between demographic variables and *Capacity development* is accepted for *Gender*, *Population group* and *Age group* but not for *Years of service*.

7.9.1.9 Demographic variables and Customer focus

No significant positive ($p > 0.05$) relationship was reported between all the demographic variables and Customer focus. Thus the Bonferroni post-hoc test was not calculated for this factor. Table 7.28 below presents the results of the ANOVA test.

Table 7.28: Demographic variables and Customer focus

Independent Variable: Customer focus		
Demographic variables	F-value	Sig.(p)
Gender	1.695	0.1947
Population group	2.050	0.0895
Age group	0.623	0.6468
Years of service	1.641	0.1515

(* $p < 0.05$)

The null-hypothesis asserting that there is no relationship between demographic variables and *Customer focus* is accepted for all the demographic variables.

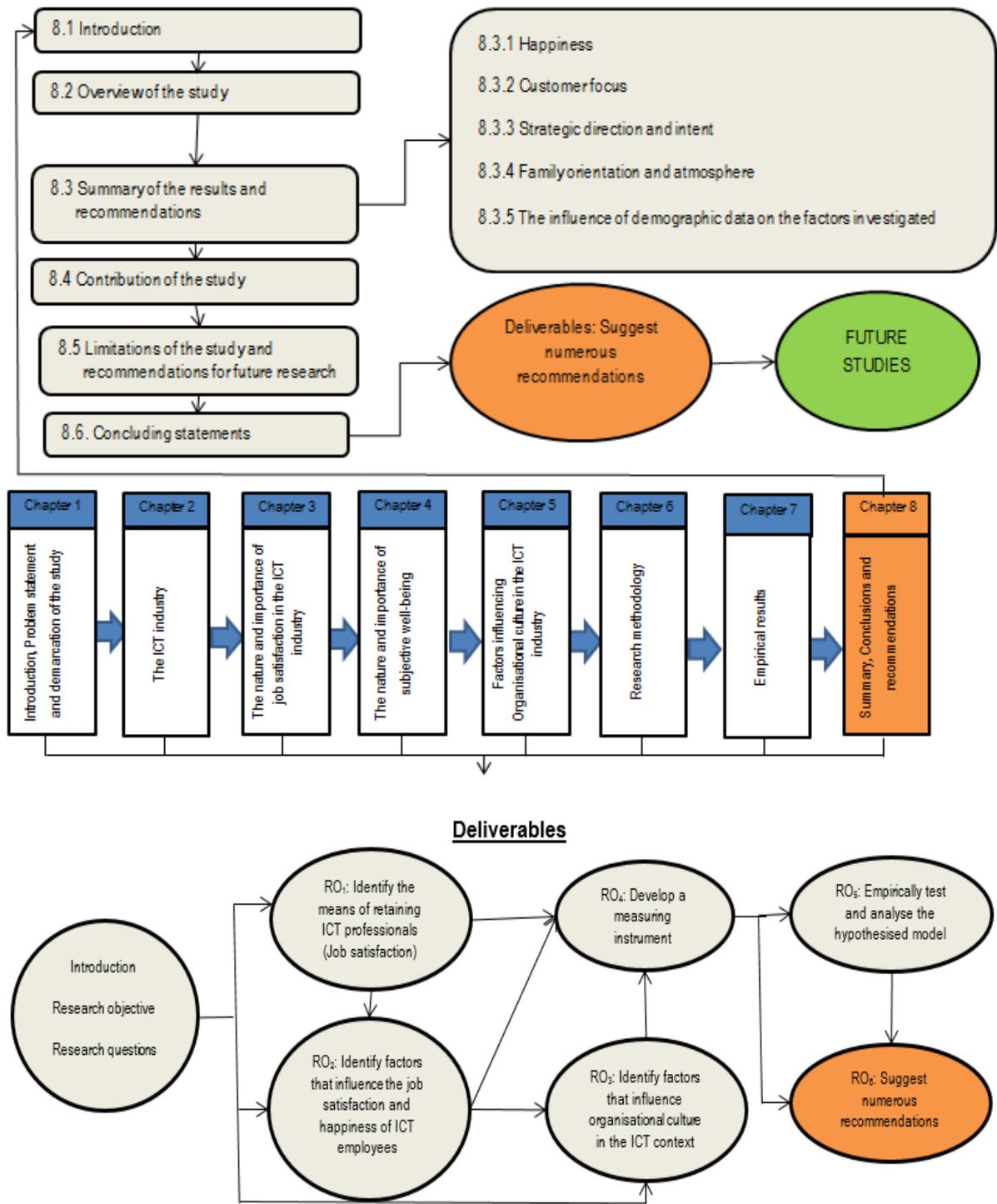
7.10 SUMMARY

The aim of this chapter was to present the empirical results of the study. A summary of the demographic information concerning the respondents and the length of time they had been working in the ICT business was given. With regard to the validity and reliability of the scales, seven factors were identified as influencing ICT employees' *Happiness* as well as their *Job satisfaction*. These factors were *Customer focus*, *Capacity development*, *Artefacts and symbols*, *Creating change*, *Team orientation*, *Strategic direction and intent* and *Family orientation and atmosphere*. All these factors and the mediating variable *Happiness* and the dependent variable *Job satisfaction* provided enough evidence of reliability. The operational definitions of the variables were reformulated and the model revised based on these results.

In order to summarise the gathered data, numerous descriptive statistics (means, frequency distribution and standard deviations) were calculated. Pearson's correlation coefficients were calculated to assess the relationships between the different variables. Moreover, the influence of the independent variables on the mediating variable, and the influence of the mediating variable on the dependent variable were assessed by means of Multiple Regression Analysis. Finally, an analysis of the variance (ANOVA) was conducted in order to evaluate the influence of various demographic variables on all the variables investigated in this study.

Chapter 8, the last chapter of this study will provide interpretations of the results as well as a brief summary of the study. Recommendations to ICT businesses will be provided based on the implications of the empirical results. Lastly, the contribution of the study, its limitation and recommendations for future studies will be delivered.

Figure 8.1: Structure and deliverable of chapter 8



CHAPTER 8

CONCLUSIONS AND RECOMMENDATIONS

8.1 INTRODUCTION

ICT is of increasing importance in the economies of most countries around the world. There is a large demand for ICT employees and as organisational culture affects the success of ICT businesses, the purpose of this study was to provide ICT organisations and managers with numerous ways to keep their employees happy and satisfied with their job by identifying the factors that influence their happiness and job satisfaction. Therefore, the primary objective of this study was to identify and empirically test the influence of various factors of organisational culture on the mediating variable, *Happiness*, and the influence of *Happiness* on the *Job satisfaction* of employees in the ICT industry in South Africa.

Chapter 8 is the concluding chapter of this study. The aim of this chapter is to suggest recommendations to ICT businesses and managers, based on the findings of this study. Hence this chapter is addressing the final research question and objective (RQ₆, RO₆). This chapter will deliver an overview of the study and will summarise the most significant results (Section 8.2). Based on these findings, interpretations and recommendations to ICT businesses and managers will be provided (Section 8.3). Subsequently, the contributions of this study will be discussed (Section 8.4) and the various limitations of this study will be highlighted, followed by recommendations for future research (Section 8.5). This study will end with a concluding statement (Section 8.6).

8.2 OVERVIEW OF THE STUDY

Based on the limited published research on the happiness of ICT employees and the important role that organisational culture plays on the happiness and job satisfaction of ICT employees (Blue papers 2011: 12), the primary objective of this study was to identify and empirically test the influence of various dimensions of *Organisational culture* on the mediating variable *Happiness* and the influence of *Happiness* on the *Job satisfaction* of employees in the ICT industry in South Africa. In order to address the primary objective of this study, subsequent secondary objectives were developed:

- RO₁ To conduct a theoretical review into and identify the means of retaining ICT professionals.
- RO₂ To conduct a theoretical investigation and identify factors that influence the job satisfaction and happiness of employees in the ICT industry.
- RO₃ To identify factors that influence organisational culture in the ICT context.
- RO₄ To develop a measuring instrument that will assess empirically the relationship as defined in the hypothesised model.
- RO₅ To empirically test and analyse the hypothesised model by conducting a survey with ICT industry's employees in South Africa.
- RO₆ To suggest recommendations based on the findings of the statistical analysis to managers in the ICT industry so that they can improve their organisational culture and at the same time enhance the happiness and job satisfaction of their employees.

In Chapters 2, 3, 4 and 5, a comprehensive literature review was conducted, thus addressing the first, second and third secondary objectives of this study. In the following paragraphs, a brief overview of these chapters is presented.

Chapter 2 addressed the first research objective of this study (RO₁). This chapter focused on the ICT industry. The discussion started by conceptualising information and communication technologies. The concept was proven to have various definitions but for the purpose of this study, the concepts information technology (IT) and information and communications technologies (ICT) were used as synonyms and were described as a varied group of technological gears and resources which are used to generate, distribute, communicate, administer and collect information. Chapter 2 further discussed the importance of the ICT industry. It was demonstrated that ICT influences almost all sectors in the economy. This importance was emphasised in economies around the world as well as in the manufacturing, education, healthcare, banking, tourism, and agriculture sectors. The key to a sustainable ICT sector has been proven to be human talents with the right skills set; therefore job employment in the ICT industry was discussed. Numerous challenges were recognised in the ICT industry among which retention of employees was one of

the most serious. Job satisfaction was identified as a solution to this problem and it was suggested that factors that influence the job satisfaction of ICT employees should be investigated.

Chapter 3 addressed the second research objective (RO₂). This chapter focused on the nature and importance of job satisfaction in general and specially in the ICT industry. Several definitions of job satisfaction were presented, however, for the purpose of this study, *Job satisfaction* refers to a positive sensation that people have about their jobs, based on the evaluation of the features of the job. Numerous literature sources were consulted to identify the components influencing job satisfaction. ICT employees' job satisfaction was elaborated on and it was found that little has been said on the influence of happiness on job satisfaction in the ICT industry. The causal relationship between happiness and job satisfaction was discussed.

Chapter 4 investigated the nature and importance of subjective well-being, also known as happiness. Various definitions of subjective well-being as well as happiness were identified. For the purpose of this study, subjective well-being and *Happiness* were used synonymously and were described as the extent to which individuals weigh the overall quality of their life as enjoyable. The importance of happiness in the society was discussed. Numerous components were identified as influencing happiness, however due to the difficulty to assess some of the factors and due to time constraints, this study only focused on the institutional factors of organisational culture as it plays a vital role in the success of ICT businesses (Blue papers 2011: 12). Hence this chapter attained the second research objective (RO₂).

The next secondary objective (RO₃) was achieved in Chapter 5. This chapter focused on the concept of organisational culture. For the purpose of this study, *Organisational culture* was defined as a system of shared means held by employees that differentiates a business from other businesses. The importance as well as different levels of organisational culture were discussed and numerous types of organisational culture were identified in general and also in the ICT context. Chapter 5 discussed various factors influencing organisational culture. Over 250 factors were identified in the literature but for the purpose of this study, the focus was on 13 factors that were selected based on their significance to ICT employees. A model

testing the relationship between the identified constructs was proposed and method used to test these relationships was discussed in Chapter 6.

Chapter 6 addressed the fourth secondary research objective of this study (RO₄). In this chapter, the research methodology and design were elaborated on. The population as well as the sampling method were described. With regard to the data collection procedure, a questionnaire was designed and the process for collecting the primary data was explained. The method used to evaluate the validity and reliability of the questionnaire was elaborated on. A Confirmatory and Exploratory Factor Analysis were utilised to assess the validity of the items measuring the dependent, mediating and independent variables. Confirmatory Factor Analysis was used for the dependent and the mediating variables, whereas the Exploratory Factor Analysis was used for the independent variables. In order to assess the reliability of the measuring instrument, Cronbach's alpha coefficients were calculated. Finally the statistical techniques adopted to analyse the data were described.

The fifth secondary research objective (RO₅) was addressed in Chapter 7. This chapter presented the results of the statistical analyses. The validity of the dependent and mediating variables were assessed by a Confirmatory Factor Analysis, whereas an Exploratory Factor Analysis was performed to evaluate the validity of the independent variables. Factor loadings higher than 0.4 were considered significant in this study. Due to the fact that the number of respondents was small and the number of variables large, item parcelling was used to improve the ratio of respondents to variables. An item parcel is described as a combined-level indicator which includes the average or the sum of two or more items (Little, Cunningham, Shahar & Widaman 2002: 152).

After the item parcelling process was accomplished, only seven factors out of the 13 factors intended to measure *Happiness* were extracted, namely *Customer focus*, *Capacity development*, *Artefacts and symbols*, *Creating change*, *Team orientation*, *Mission and Family Orientation* and *atmosphere*. All the parcels measuring these factors did not load together as expected. For example, only three out of five parcels intended to measure *Artefacts and symbols* loaded together. The two others did not load onto any factors, therefore they were removed for further statistical analyses. In a similar manner, two out of three parcels developed to measure *Creating change*

loaded together. Additionally, a parcel initially developed to measure *Empowerment* also loaded onto these factors. The operationalisation of *Creating change* was modified accordingly. Both parcels used to assess *Mission* loaded together as expected. However, two parcels developed to measure *Vision* as well as two parcels developed to measure *Goals* also loaded onto *Mission*. Therefore this factor was renamed *Strategic direction and intent* and the operationalisation was modified accordingly.

In order to confirm the reliability of the measuring instrument, Cronbach's alpha coefficients were calculated for each factor. All the factors reported Cronbach's alpha coefficients greater than 0.70, confirming the reliability of the scales measuring the extracted factors. Based on the findings of the factor analyses, the hypothesised model as well as the hypotheses were revised.

In order to summarise the sample data, descriptive statistics were calculated. The majority of respondents reported that they were satisfied with their jobs in the ICT business. Furthermore, almost half of the respondents reported that they were happy with their lives. With regard to the independent variables, mean scores of between 5.402 (*Customer focus*) and 4.263 (*Capacity development*) were returned, with most of the respondents supporting the suggestion that the supervisors in the ICT in which they are working are family-orientated.

The degree of correlation or relationships between the various factors investigated in this study was established using the Pearson's correlation coefficients. The dependent variable *Job satisfaction* and the mediating variable *Happiness* were proven to be significantly and positively correlated to all the independent variables under investigation. Additionally, all the independent variables were also proven to be significantly correlated to each other, positively as well as negatively.

The influence of the various independent variables on the mediating variable *Happiness* as well as the influence of *Happiness* on the dependent variable *Job satisfaction* were investigated by multiple regression analyses. Relationships at a 5% level were first considered significant; however, only two relationships (*Happiness* and *job satisfaction* and *Strategic direction and intent* and *Happiness*) were identified in this case. Therefore relationships at a 10% level were also considered significant in this study. At a 10% level, positive significant relationships were reported between

Customer focus, Strategic direction and intent, Family orientation and atmosphere and Happiness.

An Analysis of Variance (ANOVA) was undertaken in order to evaluate the influence of selected demographic variables on the dependent, mediating and independent variables under investigation. Relationships were reported significant at the 5%, 1% and 0.1% levels. The statistical significance between the differences in mean scores was assessed using the Bonferroni post-hoc test. The results of this study demonstrated that the *Population group, Age group* and the *Years of service* had a significant influence on some of the independent variables and the mediating variable investigated in this study. No significant positive relationship was found between the dependent variable *Job satisfaction* and any of the demographic variables.

8.3 SUMMARY OF THE RESULTS AND RECOMMENDATIONS

In chapter 7, numerous factors were reported as having a significant influence on the *Happiness* of ICT employees. *Happiness* was also found to have a significant influence on the *Job satisfaction* of ICT employees. Figure 7.3 presented a summary of these relationships. In the subsequent section, these significant relationships will be interpreted and various recommendations will be made. The last research objective of this study will therefore be addressed.

8.3.1 HAPPINESS

The empirical results of this study support the fact that the extent to which ICT employees perceive the overall quality of their life as enjoyable, as well as the extent to which they are happy, satisfied with their life, feel comfortable with themselves, perceive the world as a good place and look at the bright side of life, has a significant positive influence on their *Job satisfaction*. The more ICT employees are “happy”, the more likely they are to experience their involvement in the business as rewarding, fulfilling, enjoyable and satisfactory, as well as the more satisfied they will be with the way in which they work together in the business.

Based on this result, ICT managers should focus on the happiness of their employees in order to keep them satisfied with their jobs. In order to achieve this goal, the following recommendations are suggested:

- ICT managers should engage in activities that make their employees happy. This can be done by organising a survey at the beginning of each year to establish their employees' interests and then try to plan these events as part of the business's yearly events. This can include a camp day, playing sport, planning a small trip with employees or any other events.
- ICT managers should make employees realise that "life is good". In order to achieve this, ICT managers should practise random acts of kindness at work. These can include smiling at employees, open doors for employees or randomly offer gifts to them. Another act of kindness can be organising outdoor activities with employees.
- ICT managers should encourage employees to feel comfortable with themselves. This can be attained by cheering employees up when they feel down, and if possible have a business uplifting strategy. Additionally the managers could listen to what employees have to say without judgment or interruption.
- ICT managers should inspire employees, making them feel appreciated, complementing them, thanking them for a job well done and praising them publicly.
- ICT managers should encourage employees to look at the "bright side of life". In order to do so, ICT managers can organise activities such as baby showers, birthdays and end-of-year parties. Feeling that someone is caring for them and sharing good time with their peers workers will help employees to look at the "bright side of life".

8.3.2 CUSTOMER FOCUS

Customer focus has a significant positive influence on the *Happiness* experienced by ICT employees. The more the business's objectives are driven primarily by customer satisfaction, its strategy for competitive advantage is based on an understanding of customer needs. Customer satisfaction is monitored by both the business and its employees and the more customer inputs influence business decisions, the more likely employees are to be happy. In other words, employees will perceive the overall quality of their lives as enjoyable, they will be more likely "happy", satisfied with their

lives, feel comfortable with themselves, perceive the world as a good place and look at the bright side of life, if the business where they are working is customer focused.

ICT business managers should emphasise customer focus when it comes to the management of their businesses. In order to do so, the following recommendations are put forward:

- ICT business managers should constantly monitor their employees' level of orientation and commitment to serve customers' needs. Knowing and serving customers' needs contribute to ensure that ICT employees are customer focused, which will in turn enhance ICT employees' happiness.
- Changes in the ICT business should be based on customers' comments and recommendations. ICT employees should frequently take customers' comments and recommendations into consideration when applying changes in the business in order to be happy.
- ICT employees are happy when their customers are satisfied, therefore ICT business managers should set objectives that are primarily driven by customer satisfaction.
- ICT managers should frequently use customer feedback tools such as pre-sale and post-sale feedback, surveys or questionnaires in order to measure their customers' satisfaction. The necessary changes should be made when customers are not satisfied.
- ICT employees should freely communicate information about their unsuccessful and successful customer experiences across all business functions. By doing so, the successful experiences will serve as benchmarks and the unsuccessful ones could be avoided in future.
- ICT business managers should have a clear understanding of customer's needs and set the business's strategy for competitive advantage accordingly. In order to understand customer's needs, ICT business managers can provide customer incentives to their clients such as giving away some targeted product, sale offers or rebates. This will help to identify what customers like and what are their needs.

8.3.3 STRATEGIC DIRECTION AND INTENT

The findings of this study support that *Strategic direction and intent* has a significant positive influence on the *Happiness* of ICT employees. In other words, the more the business has a clear strategic direction, leaders set clear goals and ambitions, there is a long-term purpose and direction for the business, and progress is measured against the goals set, the more likely ICT employees are to perceive the overall quality of their life as enjoyable as well as the more likely they are to be happy, satisfied with their life, feel comfortable with themselves, perceive the world as a good place and look at the bright side of life.

ICT owners should take the following recommendations into consideration in order to ensure that the ICT business has a strategic direction and intent that will contribute to ICT employees' happiness:

- ICT business managers should set a clear mission that gives direction and meaning to ICT employees' work. When ICT employees know what is expected from them, they are more likely to perceive the overall quality of their life as enjoyable, as well as the more likely they are to be happy, satisfied with their life, feel comfortable with themselves, perceive the world as a good place and look at the bright side of life. ICT businesses should also have a written mission statement that should be available to and visible by all the employees.
- ICT business managers should regularly remind their staff what the business believes in, the reason why the business exists, as well as the purpose of the business values. By doing so, ICT employees will have a clear perception of the mission to be achieved and will be more likely to be happy.
- ICT business managers should organise work in such a manner that employees can see the relationship between their jobs and the goals of the business to be attained. This can be done by setting monthly goals to be attained at a meeting with all the employees at the beginning of each month.
- ICT business managers should set goals for employees that are ambitious yet realistic. ICT employees feel happy when they have aspiring yet attainable goals.

- ICT business managers should make sure that their employees have a shared vision of what the business will be like in the future. Knowing where the business is heading and how the final destination will be reached will lead to ICT employees' happiness.
- ICT business managers should have a vision that creates excitement and motivation for their employees, resulting in more happy employees.
- ICT business managers should make sure that the vision of the business is shared across different levels and functions of the business. Having a common vision across all the functions of the business will make ICT employees more likely to perceive the overall quality of their life as enjoyable as well as happy, satisfied with their life, feel comfortable with themselves, perceive the world as a good place and look at the bright side of life.
- ICT business should have meetings where each employee has the capacity to contribute to the business's vision. By doing so, the employees will identify themselves with the business vision and will be more likely to be happy.

8.3.4 FAMILY ORIENTATION AND ATMOSPHERE

The findings of this study demonstrate that there is a significant positive relationship between *Family orientation and atmosphere* and *Happiness*. In other words, the more supervisors are encouraged to be sensitive to employees' non-work needs, employees are treated as total persons, and the business has a real interest in employees' welfare, as well as the extent to which a unique family atmosphere is created in the business where dedication and loyalty are emphasised, the more likely ICT employees will feel happy. In other words, the more the business is family orientated; the more likely ICT employees are to perceive the overall quality of their life as enjoyable, as well as the more likely they are to be happy, satisfied with their life, feel comfortable with themselves, perceive the world as a good place and look at the bright side of life.

Based on the influence that *Family orientation and atmosphere* has on the *Happiness* of ICT employees, ICT managers should implement a family atmosphere in their business. In order to do so, the following recommendations are suggested:

- ICT managers should be sensitive to their employees' personal concerns. In order to do so, they can provide healthcare packages for each employee as well as for their family. ICT managers can also provide collateral benefits for employees who have been partially incapacitated.
- ICT managers should make sure that employees are treated as total persons in the business. This can be achieved by treating each employee like family, calling each employee by his/her name, supporting them when in a crisis and providing legal assistance to employees.
- ICT managers should create a unique family atmosphere. In order to do so, ICT employees should be provided with benefits such as compassionate leave, leave for getting married, offices parties, as well as offering training courses for individual growth to employees. ICT managers can also create a unique family atmosphere by allowing employees to come to work with their pets or with different objects that will make them feel like they are at home, such as family pictures, favourite mugs, plants and so forth.
- ICT managers should be sympathetic towards employees' childcare responsibilities. This can be done by providing family-friendly-related practices such as child care facilities for employees with babies or younger children.
- ICT managers should emphasise loyalty and dedication, by letting employees know that the quality of their work, their attitude, vision and their commitment to the business are recognised and valued.

8.3.5 THE INFLUENCE OF DEMOGRAPHIC DATA ON THE FACTORS INVESTIGATED

The primary objective of this study was to empirically test the influence of numerous factors of *Organisation culture* on *Happiness* and the influence of *Happiness* on the *Job satisfaction* of ICT employees nationally. Additionally, an analysis was conducted to assess the influence of selected demographic variables on the dependent, mediating and independent variables investigated. The result of this analysis will be interpreted in the subsequent paragraphs.

8.3.5.1 The influence of demographic variables on Happiness

The findings of this study demonstrated that the demographic variables *Gender*, *Age group*, and *Years of service* had no influence on the *Happiness* of ICT employees. In other words, neither gender nor the age group or the length of time worked in the ICT business, had any influence on the extent to which ICT employees perceive the overall quality of their life as enjoyable, as well as the extent to which they are to be happy, satisfied with their life, feel comfortable with themselves, perceive the world as a good place and look at the bright side of life.

On the other hand, the demographic variable *Population group* had a significant influence on *Happiness*. ICT employees who were Coloured, Asian and White, are more likely to be happy than the population group Other. ICT managers can therefore create a working environment in which employees from all population groups feel accepted. This will contribute to the happiness of all employees and not only certain population groups.

8.3.5.2 The influence of demographic variables on Family orientation and atmosphere

The results of this study found no significant relationship between the demographic variables *Gender*, *Population group*, and *Age group* and *Family orientation and atmosphere*. Neither gender, nor population group or even age group had any influence on the extent to which supervisors are encouraged to be sensitive to employees' non-work needs, employees are treated as total persons and the business has a real interest in employees' welfare, as well as the extent to which a unique family atmosphere is created in the business where dedication and loyalty are emphasised.

However, a positive relationship was found between the demographic variable *Years of service* and *Family orientation and atmosphere*. Employees who had worked for the ICT business for less than a year are more likely to be concerned with the extent to which supervisors are encouraged to be sensitive to employees' non-work needs, employees are treated as total persons and the business has a real interest in employees' welfare, and also the extent to which a unique family atmosphere is

created in the business where dedication and loyalty are emphasised, than employees who had worked for the ICT business between three and five years.

Based on these findings, it is recommended that ICT managers should take special care in creating a family atmosphere for new employees. This can be done by organising a party at work to welcome new employees and to make them feel as they are part of a family in the business. Additionally, ICT managers should think about changing the perks that they are offering to their employees every two years so that employees that have worked for the business between three and five years do not get used to the perks that are offered by the ICT business.

8.3.5.3 The influence of demographic variables on Strategic direction and intent

The findings of this study revealed that the demographic variables *Gender*, *Population group* and *Age group* had no influence on *Strategic direction and intent* of ICT employees. In other words, neither gender, nor population group or even age group had an influence on the extent to which the business has a clear strategic direction, leaders set clear goals and ambitions, there is a long-term purpose and direction for the business, and progress is measured against the goals set.

On the other hand, the demographic variable *Years of services* was found to have a positive influence on *Strategic direction and intent*. ICT employees that have worked for the business for less than a year are more concerned about the Strategic direction and intent of the business. Therefore, it is recommended that ICT managers make sure that new employees and employees who have worked in the business for less than a year know the mission, vision, goals and objectives of the business. This can be done by having a presentation for new employees where the manager explains to them what the business is about, what are their mission, vision and objectives and how they intend to accomplish them. Furthermore ICT owners/managers should also frequently change the goals and objectives of employees who had worked in the business for more than three years so that they do not feel like the work is repetitive.

8.3.5.4 The influence of demographic variables on Team orientation

None of the demographic variables *Gender*, *Population group* and *Years of service* had an influence on *Team orientation*. However, the demographic variable *Age group* was found to have a significant influence on *Team orientation*. Employees in the age group of 18-25 years of age and those in the age group of 26-35 years of age were demonstrated to be more likely to feel that they work as part of a team, that cooperation across different parts of the organisation is encouraged, that teams are rewarded for their achievement as a team, as well as more likely to be pleased by the availability of rooms to relax and sport facilities, than employees in the age group of 36-45, 46-55 and 56 years and older.

Based on these results, it can be recommended that ICT managers take age into consideration when building teams in the business. They should put people from different ages into a team. Additionally, the age group should also be taken into consideration during the creation of rooms to relax. These rooms can include video games for younger employees but also strategic games such as chess or Sudoku puzzles for older employees.

8.3.5.5 The influence of demographic variables on Artefacts and symbols

No significant positive relationship was found between the demographic variables *Gender*, *Population Group* and *Age group* and *Artefacts and symbols*. However, the results of this study show that the demographic variable *Years of service* has a significant positive influence on *Artefacts and symbols*. ICT employees who have worked for the business for less than a year are more sensitive to what they can feel, hear and see when walking into a business, such as the physical environment that encourages productivity, creativity and exchange of ideas, as well as areas where they can eat meals and interact socially, than employees who have worked for the business between three to five years, six to ten years and eleven to twenty years. Based on these findings, it is recommended that ICT managers should modify the physical environment of the business every two years so that employees do not get used to the environment and always have a physical environment that encourages their productivity, creativity and exchange of ideas.

8.3.5.6 The influence of demographic variables on Capacity development

The findings of this study show that there is no relationship between the demographic variables *Gender*, *Population group* and *Age group* and *Capacity development*. However, a significant positive influence was found between the demographic variable *Years of services* and *Capacity development*. Employees, who have worked for the ICT business for less than a year, are more sensitive to a situation where the business cares for their Capacity development, than employees who have worked for the business between three to five years and between six to ten years. Based on this result, it is recommended that ICT managers should frequently propose new training programmes that will aim at developing the knowledge of all employees and not only training for new employees in the business.

8.4 CONTRIBUTION OF THE STUDY

This study has made a contribution to the field of happiness research by focusing on the influence of organisational culture on the happiness of employees in the ICT industry. There are limited studies on the influence of organisational culture on the happiness of employees and more particularly in the ICT industry. This study has made a contribution by developing a questionnaire that is appropriate for assessing the factors influencing organisational culture, happiness and job satisfaction in the ICT industry. Some items of this questionnaire could be used to develop other measuring instrument for future studies.

An important contribution has been made towards understanding the factors influencing the happiness and job satisfaction of employees in the ICT industry, by means of the theoretical model developed in this study. As a result, the study presents recommendations and suggestions to assist ICT businesses to improve their organisational culture and at the same time enhance the happiness and job satisfaction of their employees.

8.5 LIMITATIONS OF THE STUDY AND RECOMMENDATIONS FOR FUTURE RESEARCH

This study has contributed to a better understanding of the influence of organisational culture on the happiness of employees in the ICT industry. However, a few limitations have been acknowledged. Based on these limitations,

recommendations will be made on how to overcome these difficulties in future research:

- The research under investigation was based on non-probability (convenience sampling) sampling, therefore the results cannot be generalised to the population as a whole. The sample was also limited in its size. Future studies can be based on probability samples that are more representative. In addition, a larger sample should be obtained for future studies.
- Although previous studies had proven the validity and reliability of the items used to develop the measuring instrument, several items did not load as expected. As a consequence, many of the factors identified as influencing organisational culture, in the literature were removed from further statistical analysis and some new factors emerged. Future studies should reconsider and redevelop the original scales used to assess the various components influencing organisational culture and happiness to guarantee that the influence of the removed factors can be measured.
- This study only focuses on selected factors and does not consider the various other factors influencing Job Satisfaction (reward-based factors, organisational-based factors and relational-based factors), Happiness (internal and external factors), and organisational culture. Future studies could present a broader view on the subject by investigating these factors as well.
- The small sample size of this study led to the use of item parcelling. However, Little *et al.* (2002: 153) criticised the practice of parcelling, arguing that parcelling misrepresents the reality and it camouflages the issues of incorrect model specification or poor item selection. Future research should have large enough samples to avoid the use of item parcelling.
- Only 187 usable questionnaires out of 960 sent were returned after the two-month period allowed for the collection of data. This demonstrated that the time period allocated for the respondents to return the questionnaires was too short. Future studies should set more time aside for the collection of data.
- Even though the Multiple Regression Analysis revealed some significant relationships between some factors under investigation and happiness, most of these relationships were only significant at a 10% level. At a 1% level, the only significant relationship was between *Happiness* and *Job satisfaction*, and

at a 5% level, the significant relationship was between *Strategic direction and intent* and *Happiness*. These statistics should be taken into consideration when interpreting the results of this study.

- This study focused on the influence of organisational culture on the happiness of the ICT employees only. Making use of the same measuring instrument, future research could investigate happiness, job satisfaction and organisational culture among employees in other sectors to determine whether the results reported by employees in other sectors are the same or different from those reported in this study.

8.6 CONCLUDING STATEMENT

The ICT industry is growing tremendously in importance in the economies of many countries. The success of this industry relies on human capital with the right skills. In order for ICT businesses to keep these solicited employees, they must keep them happy and satisfied with their job. One critical component that has been proven to be contributing to the success of this industry is organisational culture. This study therefore provides a better understanding of the influence of organisational culture on the happiness of employees in the ICT industry. It is expected that the results of this study, together with those of future research, will offer useful suggestions to ICT managers on how to ensure the happiness of their employees, hence retaining them.

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APPENDIX 1

WRITTEN INFORMATION GIVEN TO PARTICIPANT PRIOR TO PARTICIPATION

• PO Box 77000 • Nelson Mandela Metropolitan University

• Port Elizabeth • 6031 • South Africa



Unit for Applied Business Management

Summerstrand South Campus

DEPARTMENT OF BUSINESS MANAGEMENT

Tel. +27 (0)41 5042203/04 Fax. +27 (0)41 5832644

July – August 2013

Dear Respondent

RESEARCH PROJECT: THE INFLUENCE OF ORGANISATIONAL CULTURE ON THE HAPPINESS OF EMPLOYEES IN THE ICT INDUSTRY

As per our conversation with you or your employer, please find enclosed the questionnaire to be completed. Thank you for your willingness to assist us in this research project.

This research on the influence of organisational culture on the happiness of employees in the ICT industry is currently (2013) being conducted by the Unit for Applied Business Management (UABM). The UABM is a research unit functioning under the auspices of the Department of Business Management at the Nelson Mandela Metropolitan University (NMMU) in Port Elizabeth.

Even though the ICT industry has been shown to occupy an important place in our 21st century digital economy, the retention of talented ICT staff has been a huge challenge over several past decades. With the existing lack of ICT skilled labour, businesses should make sure they retain their staff. The result of losing qualified employees can be catastrophic for the organisation as they leave with their expertise, tacit knowledge and intellectual capital. ICT professionals revealed more loyalty to their own personal improvement and careers than to their employers even though they are gradually solicited. Therefore, ensuring job satisfaction represents a vital task of management since satisfaction brings confidence, loyalty, and eventually advances quality in the output of the employed. Regardless of the

fact that there are many factors influencing job satisfaction, the focus of this study will be on happiness as it can be the source of employee's productivity in organisations. Happiness is considered across cultures as the central component in people's lives and more significant than success. Furthermore, it has been shown that happy employees equal happy customers and happy customers lead to a profitable and sustainable business. Due to the difficulty in finding items to assess some factors of happiness, the complexity to assess them and the time constraint, this study will only focus on the influence of organisational culture on happiness as organisation culture is vital for the success of ICT industry.

The **purpose** of this study is thus to gain a better understanding of the relationship between organisational culture and happiness in the ICT industry, and the influence of happiness on ICT employees' job satisfaction. In this research project, the concept happiness refers to the extent to which a person weighs the overall quality of his/ her life as enjoyable. Organisational culture on the other hand will be defined as a system of shared importance held by employees that differentiates a business from other businesses.

Please complete the attached questionnaire independently and **without** consultation with your employer (owner-manager), and other ICT employees.

The first set of questions comprises a number of statements relating to your perspective. Please indicate the **extent of your agreement** with these statements by placing a cross (X) in the appropriate column. There are no right or wrong answers, and only the **perceptions** you hold are important. The next set of questions solicits basic demographic data concerning you and the business in which you are employed.

The questionnaire should take about twenty minutes to complete.

Please return the completed questionnaire **as soon as possible**, but not later than **30 August 2013** to Prof Calitz:

By email: Andre.calitz@nmmu.ac.za

Please note that participation to this study is completely voluntary and you may opt out at any stage. Even though no confidential information is required, your responses will be treated with the strictest confidentiality.

Should you **be interested** in the results of this study, a copy of the findings would be made available to you. If this is the case, please ensure that your contact details are given in the space provided.

Thank you once again for your willingness to contribute to the success of this important research project.

Yours faithfully

PROF ELMARIE VENTER (SUPERVISOR)

PROF ANDRE CALITZ (CO-SUPERVISOR)

ARNAUD LAMA NDAI (STUDENT)

APPENDIX 2

ELECTRONIC QUESTIONNAIRE

QUESTIONNAIRE: The influence of organisational culture on the happiness of employees in the ICT industry

1. Description of the study

This research is about the influence of organisational culture on the happiness of employees in the ICT industry. The purpose of this study is to gain a better understanding of the relationship between organisational culture and happiness in the ICT industry, and the influence of happiness on ICT employees' job satisfaction. In this research project, the concept happiness refers to the extent to which a person weighs the overall quality of his/ her life as enjoyable. Organisational culture on the other hand will be defined as a system of shared importance held by employees that differentiates a business from other businesses. Please complete the questionnaire independently and without consultation with your employer (owner-manager), and other ICT employees.

The first set of questions comprises a number of statements relating to your perspective.

2. Empowerment

Please indicate the extent of your agreement with these statements by choosing the appropriate column. The columns are graded from 1 to 7. One (1) denotes strong disagreement with a statement, and at the other end of the scales, seven (7) denotes strong agreement with the statement.

2.1 [In this business I make decisions at the level where the best information is available.](#)

Strongly disagree	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7	Strongly agree
-------------------	---	----------------

2.2 [In this business, I believe that I can have a positive impact.](#)

Strongly disagree	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7	Strongly agree
-------------------	---	----------------

- 2.3 [In this business my efforts to take initiative is recognised.](#)
- Strongly disagree 3 1 2 4 5 6 7 Strongly agree
- 2.4 [In this business, I have control over the resources needed to accomplish my work.](#)
- Strongly disagree 3 1 2 4 5 6 7 Strongly agree
- 2.5 [In this business, I can influence the way work is done.](#)
- Strongly disagree 3 1 2 4 5 6 7 Strongly agree
- 2.6 [In this business, authority is delegated so that I can act on my own.](#)
- Strongly disagree 3 1 2 4 5 6 7 Strongly agree

[3. Team Orientation](#)

Please indicate the extent of your agreement with these statements by choosing the appropriate column. The columns are graded from 1 to 7. One (1) denotes strong disagreement with a statement, and at the other end of the scales, seven (7) denotes strong agreement with the statement.

- 3.1 [In this business I work like I am part of a team.](#)
- Strongly disagree 3 1 2 4 5 6 7 Strongly agree
- 3.2 [In this business cooperation across different parts of the organisation is actively encouraged.](#)
- Strongly disagree 3 1 2 4 5 6 7 Strongly agree

- 3.3 [In this business teams are used to get work done.](#)
- Strongly disagree 3 1 2 3 4 5 6 7 Strongly agree
- 3.4 [In this business teams treat members as equals, regardless of rank, culture, or other differences.](#)
- Strongly disagree 3 1 2 3 4 5 6 7 Strongly agree
- 3.5 [In this business, teams revise their thinking as a result of group discussions or information collected.](#)
- Strongly disagree 3 1 2 3 4 5 6 7 Strongly agree
- 3.6 [In this business teams are rewarded for their achievement as a team.](#)
- Strongly disagree 3 1 2 3 4 5 6 7 Strongly agree

[4. Capacity development](#)

Please indicate the extent of your agreement with these statements by choosing the appropriate column. The columns are graded from 1 to 7. One (1) denotes strong disagreement with a statement, and at the other end of the scales, seven (7) denotes strong agreement with the statement.

- 4.1 [In this business there is continuous investment in the improvement of my skills.](#)
- Strongly disagree 3 1 2 3 4 5 6 7 Strongly agree
- 4.2 [In this business my capabilities are viewed as an important source of a competitive](#)
- Strongly disagree 3 1 2 3 4 5 6 7 Strongly agree

[advantage.](#)

- 4.3 [In this business gaps between my current and expected performance are measured.](#)
- Strongly disagree 3 1 2 3 4 5 6 7 Strongly agree
- 4.4 [In this business the result of the time and resources spent on my training are measured.](#)
- Strongly disagree 3 1 2 3 4 5 6 7 Strongly agree
- 4.5 [I often receive internal training.](#)
- Strongly disagree 3 1 2 3 4 5 6 7 Strongly agree
- 4.6 [I often receive external training.](#)
- Strongly disagree 3 1 2 3 4 5 6 7 Strongly agree

[5. Consistency in core values and agreement](#)

Please indicate the extent of your agreement with these statements by choosing the appropriate column. The columns are graded from 1 to 7. One (1) denotes strong disagreement with a statement, and at the other end of the scales, seven (7) denotes strong agreement with the statement.

- 5.1 [In this business there is a clear and consistent set of values that governs the way I do business.](#)
- Strongly disagree 3 1 2 3 4 5 6 7 Strongly agree
- 5.2 [In this business there is an ethical code that guides my behaviour](#)
- Strongly disagree 3 1 2 3 4 5 6 7 Strongly agree

- and tells me right from wrong. 6 7
- 5.3 In this business I have a strong sense of identity. Strongly disagree 3 1 2 4 5 Strongly agree 6 7
- 5.4 In this business I work hard to achieve `win-win` solutions. Strongly disagree 3 1 2 4 5 Strongly agree 6 7
- 5.5 In this business the leaders and managers `practice what they preach`. Strongly disagree 3 1 2 4 5 Strongly agree 6 7
- 5.6 In this business there is a unique management style. Strongly disagree 3 1 2 4 5 Strongly agree 6 7
- 5.7 In this business there is a distinct set of management practices. Strongly disagree 3 1 2 4 5 Strongly agree 6 7
- 5.8 In this business it is easy to reach consensus, even on difficult issues. Strongly disagree 3 1 2 4 5 Strongly agree 6 7
- 5.9 In this business there is a clear agreement about the right way and the wrong way to do things. Strongly disagree 3 1 2 4 5 Strongly agree 6 7

6. Creating change

Please indicate the extent of your agreement with these statements by choosing the appropriate column. The columns are graded from 1 to 7. One (1) denotes strong disagreement with a statement, and at the other end of the scales, seven (7) denotes strong agreement with the statement.

- | | | | | |
|-----|--|-------------------|---|----------------|
| 6.1 | <u>In this business, the way I do things is flexible.</u> | Strongly disagree | <input type="radio"/> 1 <input type="radio"/> 2
<input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5
<input type="radio"/> 6 <input type="radio"/> 7 | Strongly agree |
| 6.2 | <u>In this business I respond well to competitors and other changes in the business environment.</u> | Strongly disagree | <input type="radio"/> 1 <input type="radio"/> 2
<input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5
<input type="radio"/> 6 <input type="radio"/> 7 | Strongly agree |
| 6.3 | <u>In this business I am encouraged to try out new ideas.</u> | Strongly disagree | <input type="radio"/> 1 <input type="radio"/> 2
<input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5
<input type="radio"/> 6 <input type="radio"/> 7 | Strongly agree |
| 6.4 | <u>In this business I frequently improvise to solve problems when an answer is not apparent.</u> | Strongly disagree | <input type="radio"/> 1 <input type="radio"/> 2
<input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5
<input type="radio"/> 6 <input type="radio"/> 7 | Strongly agree |
| 6.5 | <u>In this business new and improved ways to do work are continually adopted.</u> | Strongly disagree | <input type="radio"/> 1 <input type="radio"/> 2
<input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5
<input type="radio"/> 6 <input type="radio"/> 7 | Strongly agree |
| 6.6 | <u>Different parts of the business often cooperate to create change.</u> | Strongly disagree | <input type="radio"/> 1 <input type="radio"/> 2
<input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5
<input type="radio"/> 6 <input type="radio"/> 7 | Strongly agree |

7. Customer focus

Please indicate the extent of your agreement with these statements by choosing the appropriate column. The columns are graded from 1 to 7. One (1) denotes strong disagreement with a statement, and at the other end of the scales, seven (7) denotes strong agreement with the statement.

- | | | | | |
|-----|--|-------------------|---|----------------|
| 7.1 | <u>Customer input directly influences my business decisions.</u> | Strongly disagree | <input type="radio"/> 1 <input type="radio"/> 2
<input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5
<input type="radio"/> 6 <input type="radio"/> 7 | Strongly agree |
| 7.2 | <u>I constantly monitor my level of commitment and orientation to serving customer needs.</u> | Strongly disagree | <input type="radio"/> 1 <input type="radio"/> 2
<input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5
<input type="radio"/> 6 <input type="radio"/> 7 | Strongly agree |
| 7.3 | <u>Customer comments and recommendations often lead to changes in this business.</u> | Strongly disagree | <input type="radio"/> 1 <input type="radio"/> 2
<input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5
<input type="radio"/> 6 <input type="radio"/> 7 | Strongly agree |
| 7.4 | <u>Our business objectives are driven primarily by customer satisfaction.</u> | Strongly disagree | <input type="radio"/> 1 <input type="radio"/> 2
<input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5
<input type="radio"/> 6 <input type="radio"/> 7 | Strongly agree |
| 7.5 | <u>Our business strategy for competitive advantage is based on an understanding of our customers' needs.</u> | Strongly disagree | <input type="radio"/> 1 <input type="radio"/> 2
<input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5
<input type="radio"/> 6 <input type="radio"/> 7 | Strongly agree |
| 7.6 | <u>In this business customer satisfaction is measured systematically and</u> | Strongly disagree | <input type="radio"/> 1 <input type="radio"/> 2
<input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5
<input type="radio"/> 6 <input type="radio"/> 7 | Strongly agree |

[frequently.](#)

[8. Organisational learning](#)

Please indicate the extent of your agreement with these statements by choosing the appropriate column. The columns are graded from 1 to 7. One (1) denotes strong disagreement with a statement, and at the other end of the scales, seven (7) denotes strong agreement with the statement.

- | | | | | |
|-----|--|-------------------|---|----------------|
| 8.1 | In this business learning is an important objective in my day-to-day work. | Strongly disagree | <input type="radio"/> 1 <input type="radio"/> 2
<input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5
<input type="radio"/> 6 <input type="radio"/> 7 | Strongly agree |
| 8.2 | In this business I try new business methods even if they may prove risky. | Strongly disagree | <input type="radio"/> 1 <input type="radio"/> 2
<input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5
<input type="radio"/> 6 <input type="radio"/> 7 | Strongly agree |
| 8.3 | In this business I am explicitly rewarded if I am a source of quality improvement. | Strongly disagree | <input type="radio"/> 1 <input type="radio"/> 2
<input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5
<input type="radio"/> 6 <input type="radio"/> 7 | Strongly agree |
| 8.4 | In this business failure is viewed as an opportunity for learning and improvement. | Strongly disagree | <input type="radio"/> 1 <input type="radio"/> 2
<input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5
<input type="radio"/> 6 <input type="radio"/> 7 | Strongly agree |
| 8.5 | In this business innovation are encouraged and rewarded. | Strongly disagree | <input type="radio"/> 1 <input type="radio"/> 2
<input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5
<input type="radio"/> 6 <input type="radio"/> 7 | Strongly agree |
| 8.6 | In this business, employees help one another to learn. | Strongly disagree | <input type="radio"/> 1 <input type="radio"/> 2
<input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 | Strongly agree |

6 79. Vision

Please indicate the extent of your agreement with these statements by choosing the appropriate column. The columns are graded from 1 to 7. One (1) denotes strong disagreement with a statement, and at the other end of the scales, seven (7) denotes strong agreement with the statement.

- | | | | | |
|-----|---|-------------------|---|----------------|
| 9.1 | <u>The vision of our business creates excitement and motivation for me.</u> | Strongly disagree | <input type="radio"/> 1 <input type="radio"/> 2
<input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5
<input type="radio"/> 6 <input type="radio"/> 7 | Strongly agree |
| 9.2 | <u>In this business I am able to meet short-term demands without compromising our long-term vision.</u> | Strongly disagree | <input type="radio"/> 1 <input type="radio"/> 2
<input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5
<input type="radio"/> 6 <input type="radio"/> 7 | Strongly agree |
| 9.3 | <u>In this business, I am invited to contribute to organisation's vision.</u> | Strongly disagree | <input type="radio"/> 1 <input type="radio"/> 2
<input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5
<input type="radio"/> 6 <input type="radio"/> 7 | Strongly agree |
| 9.4 | <u>The employees in this business have a shared vision of what the organisation will be like in the future.</u> | Strongly disagree | <input type="radio"/> 1 <input type="radio"/> 2
<input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5
<input type="radio"/> 6 <input type="radio"/> 7 | Strongly agree |
| 9.5 | <u>In this business short-term thinking often compromises our long-term vision (R).</u> | Strongly disagree | <input type="radio"/> 1 <input type="radio"/> 2
<input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5
<input type="radio"/> 6 <input type="radio"/> 7 | Strongly agree |
| 9.6 | <u>In this business alignment of vision is</u> | Strongly | <input type="radio"/> 1 <input type="radio"/> 2 | Strongly |

[built across different levels and project teams.](#)

disagree 3 4 5 agree
6 7

10. Mission

Please indicate the extent of your agreement with these statements by choosing the appropriate column. The columns are graded from 1 to 7. One (1) denotes strong disagreement with a statement, and at the other end of the scales, seven (7) denotes strong agreement with the statement.

10.1 [In this business I have a long-term purpose and direction.](#)

Strongly disagree 3 1 2 4 5 Strongly agree
6 7

10.2 [In this business there is a clear mission that gives meaning and direction to my work.](#)

Strongly disagree 3 1 2 4 5 Strongly agree
6 7

10.3 [The strategy of this business leads other organisations to change the way they compete in the industry.](#)

Strongly disagree 3 1 2 4 5 Strongly agree
6 7

10.4 [In this business there is a clear strategy for the future.](#)

Strongly disagree 3 1 2 4 5 Strongly agree
6 7

10.5 [The strategic direction of our business is clear \(R\).](#)

Strongly disagree 3 1 2 4 5 Strongly agree
6 7

11. Goals and objectives

Please indicate the extent of your agreement with these statements by choosing the appropriate column. The columns are graded from 1 to 7. One (1) denotes strong disagreement with a statement, and at the other end of the scales, seven (7) denotes strong agreement with the statement.

- | | | | | |
|------|--|-------------------|---|----------------|
| 11.1 | <u>In this business my progress is measured against stated goals.</u> | Strongly disagree | <input type="radio"/> 1 <input type="radio"/> 2
<input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5
<input type="radio"/> 6 <input type="radio"/> 7 | Strongly agree |
| 11.2 | <u>In this business I understand what needs to be done.</u> | Strongly disagree | <input type="radio"/> 1 <input type="radio"/> 2
<input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5
<input type="radio"/> 6 <input type="radio"/> 7 | Strongly agree |
| 11.3 | <u>Work is organised so that I can see the relationship between my job and the goals of the organisations.</u> | Strongly disagree | <input type="radio"/> 1 <input type="radio"/> 2
<input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5
<input type="radio"/> 6 <input type="radio"/> 7 | Strongly agree |
| 11.4 | <u>In this business there is a widespread agreement about goals to be achieved.</u> | Strongly disagree | <input type="radio"/> 1 <input type="radio"/> 2
<input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5
<input type="radio"/> 6 <input type="radio"/> 7 | Strongly agree |
| 11.5 | <u>In this business leaders set goals that are ambitious, but realistic.</u> | Strongly disagree | <input type="radio"/> 1 <input type="radio"/> 2
<input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5
<input type="radio"/> 6 <input type="radio"/> 7 | Strongly agree |

12. Family orientation and atmosphere

Please indicate the extent of your agreement with these statements by

choosing the appropriate column. The columns are graded from 1 to 7. One (1) denotes strong disagreement with a statement, and at the other end of the scales, seven (7) denotes strong agreement with the statement.

- | | | | | |
|------|---|-------------------|---|----------------|
| 12.1 | <u>In this business I am treated as a total person.</u> | Strongly disagree | <input type="radio"/> 1 <input type="radio"/> 2
<input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5
<input type="radio"/> 6 <input type="radio"/> 7 | Strongly agree |
| 12.2 | <u>This business has a real interest in my welfare.</u> | Strongly disagree | <input type="radio"/> 1 <input type="radio"/> 2
<input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5
<input type="radio"/> 6 <input type="radio"/> 7 | Strongly agree |
| 12.3 | <u>Management in this business encourage supervisors to be sensitive to my personal concerns.</u> | Strongly disagree | <input type="radio"/> 1 <input type="radio"/> 2
<input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5
<input type="radio"/> 6 <input type="radio"/> 7 | Strongly agree |
| 12.4 | <u>In general, managers in this business are accomodating of my non-work needs.</u> | Strongly disagree | <input type="radio"/> 1 <input type="radio"/> 2
<input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5
<input type="radio"/> 6 <input type="radio"/> 7 | Strongly agree |
| 12.5 | <u>This business tries to create a unique family atmosphere.</u> | Strongly disagree | <input type="radio"/> 1 <input type="radio"/> 2
<input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5
<input type="radio"/> 6 <input type="radio"/> 7 | Strongly agree |
| 12.6 | <u>In this business loyalty and dedication is emphasised.</u> | Strongly disagree | <input type="radio"/> 1 <input type="radio"/> 2
<input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5
<input type="radio"/> 6 <input type="radio"/> 7 | Strongly agree |
| 12.7 | <u>Managers in this business are sympathetic towards employees' childcare responsibilities.</u> | Strongly disagree | <input type="radio"/> 1 <input type="radio"/> 2
<input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5
<input type="radio"/> 6 <input type="radio"/> 7 | Strongly agree |

13. Open communication

Please indicate the extent of your agreement with these statements by choosing the appropriate column. The columns are graded from 1 to 7. One (1) denotes strong disagreement with a statement, and at the other end of the scales, seven (7) denotes strong agreement with the statement.

- 13.1 In this business, managers/supervisors encourage me to speak up when I disagree with decisions.
- | | | | | | | | | | | | | | | | |
|--|-------------------|---|-----------------------|---|-----------------------|---|-----------------------|---|-----------------------|---|-----------------------|---|-----------------------|---|----------------|
| | Strongly disagree | 3 | <input type="radio"/> | 1 | <input type="radio"/> | 2 | <input type="radio"/> | 4 | <input type="radio"/> | 5 | <input type="radio"/> | 6 | <input type="radio"/> | 7 | Strongly agree |
|--|-------------------|---|-----------------------|---|-----------------------|---|-----------------------|---|-----------------------|---|-----------------------|---|-----------------------|---|----------------|
- 13.2 In this business I have the freedom to express my ideas.
- | | | | | | | | | | | | | | | | |
|--|-------------------|---|-----------------------|---|-----------------------|---|-----------------------|---|-----------------------|---|-----------------------|---|-----------------------|---|----------------|
| | Strongly disagree | 3 | <input type="radio"/> | 1 | <input type="radio"/> | 2 | <input type="radio"/> | 4 | <input type="radio"/> | 5 | <input type="radio"/> | 6 | <input type="radio"/> | 7 | Strongly agree |
|--|-------------------|---|-----------------------|---|-----------------------|---|-----------------------|---|-----------------------|---|-----------------------|---|-----------------------|---|----------------|
- 13.3 In this business managers value my ideas and inputs.
- | | | | | | | | | | | | | | | | |
|--|-------------------|---|-----------------------|---|-----------------------|---|-----------------------|---|-----------------------|---|-----------------------|---|-----------------------|---|----------------|
| | Strongly disagree | 3 | <input type="radio"/> | 1 | <input type="radio"/> | 2 | <input type="radio"/> | 4 | <input type="radio"/> | 5 | <input type="radio"/> | 6 | <input type="radio"/> | 7 | Strongly agree |
|--|-------------------|---|-----------------------|---|-----------------------|---|-----------------------|---|-----------------------|---|-----------------------|---|-----------------------|---|----------------|
- 13.4 In this business information is widely shared so that I can get the information I need.
- | | | | | | | | | | | | | | | | |
|--|-------------------|---|-----------------------|---|-----------------------|---|-----------------------|---|-----------------------|---|-----------------------|---|-----------------------|---|----------------|
| | Strongly disagree | 3 | <input type="radio"/> | 1 | <input type="radio"/> | 2 | <input type="radio"/> | 4 | <input type="radio"/> | 5 | <input type="radio"/> | 6 | <input type="radio"/> | 7 | Strongly agree |
|--|-------------------|---|-----------------------|---|-----------------------|---|-----------------------|---|-----------------------|---|-----------------------|---|-----------------------|---|----------------|
- 13.5 This business uses two-way communication on a regular basis, such as suggestion systems, electronic bulletin boards, or town hall/open meetings.
- | | | | | | | | | | | | | | | | |
|--|-------------------|---|-----------------------|---|-----------------------|---|-----------------------|---|-----------------------|---|-----------------------|---|-----------------------|---|----------------|
| | Strongly disagree | 3 | <input type="radio"/> | 1 | <input type="radio"/> | 2 | <input type="radio"/> | 4 | <input type="radio"/> | 5 | <input type="radio"/> | 6 | <input type="radio"/> | 7 | Strongly agree |
|--|-------------------|---|-----------------------|---|-----------------------|---|-----------------------|---|-----------------------|---|-----------------------|---|-----------------------|---|----------------|
- 13.6 This business emphasises open
- | | | | | | | | |
|--|----------|-----------------------|---|-----------------------|---|-----------------------|--|
| | Strongly | <input type="radio"/> | 1 | <input type="radio"/> | 2 | <input type="radio"/> | |
|--|----------|-----------------------|---|-----------------------|---|-----------------------|--|

communication.

disagree 3 4 5 agree
6 7

14. Artefacts and symbols

Please indicate the extent of your agreement with these statements by choosing the appropriate column. The columns are graded from 1 to 7. One (1) denotes strong disagreement with a statement, and at the other end of the scales, seven (7) denotes strong agreement with the statement.

14.1 In this business, the physical environment (e.g. chairs, structure of offices and architecture) encourages me to be productive.

Strongly disagree 3 1 2 Strongly agree
4 5
6 7

14.2 In this business, the physical environment (e.g. chairs, structure of offices and architecture) is conducive to my creativity.

Strongly disagree 3 1 2 Strongly agree
4 5
6 7

14.3 The physical environment in this business encourages me to exchange ideas.

Strongly disagree 3 1 2 Strongly agree
4 5
6 7

14.4 In this business there are restaurants or other areas where I can eat meals and/or interact socially.

Strongly disagree 3 1 2 Strongly agree
4 5
6 7

14.5 The furniture in this business encourages

Strongly 1 2 Strongly

- [my creativity.](#) disagree 3 4 5 agree
6 7
- 14.6 [In this business there are rooms where I can relax.](#) Strongly disagree 3 1 2 Strongly agree
4 5 6 7
- 14.7 [In this business, the physical environment \(e.g. chairs, structure of offices and architecture\) encourages open communication among employees.](#) Strongly disagree 3 1 2 Strongly agree
4 5 6 7
- 14.8 [In this business, free meals are provided.](#) Strongly disagree 3 1 2 Strongly agree
4 5 6 7
- 14.9 [In this business there are sport or gym facilities.](#) Strongly disagree 3 1 2 Strongly agree
4 5 6 7
- 14.10 [In this business there are facilities that encourage recreational activities, such as playing darts and video games.](#) Strongly disagree 3 1 2 Strongly agree
4 5 6 7
- 14.11 [In this business employees have an informal dress code.](#) Strongly disagree 3 1 2 Strongly agree
4 5 6 7

- 14.12 [In this business employees address each other by their names.](#)
- Strongly disagree 3 1 2 4 5 6 7 Strongly agree
- 14.13 [In this business, our own business/organisational language was developed \(e.g. in Google employees call themselves `Googlers`\).](#)
- Strongly disagree 3 1 2 4 5 6 7 Strongly agree
- 14.14 [This business has well-known values, ceremonies and rituals.](#)
- Strongly disagree 3 1 2 4 5 6 7 Strongly agree

15. Happiness

Please indicate the extent of your agreement with these statements by choosing the appropriate column. The columns are graded from 1 to 7. One (1) denotes strong disagreement with a statement, and at the other end of the scales, seven (7) denotes strong agreement with the statement.

- 15.1 [I feel comfortable with myself.](#)
- Strongly disagree 3 1 2 4 5 6 7 Strongly agree
- 15.2 [I look at the bright side of life.](#)
- Strongly disagree 3 1 2 4 5 6 7 Strongly agree
- 15.3 [I like myself.](#)
- Strongly disagree 3 1 2 4 5 6 7 Strongly agree

- 15.4 [I feel particularly pleased with the way I am.](#)
- Strongly disagree 3 1 2
 4 5
6 7
- Strongly agree
- 15.5 [Life is good.](#)
- Strongly disagree 3 1 2
 4 5
6 7
- Strongly agree
- 15.6 [I think that the world is a good place.](#)
- Strongly disagree 3 1 2
 4 5
6 7
- Strongly agree
- 15.7 [I am well satisfied about everything in my life.](#)
- Strongly disagree 3 1 2
 4 5
6 7
- Strongly agree
- 15.8 [I am happy.](#)
- Strongly disagree 3 1 2
 4 5
6 7
- Strongly agree
- 15.9 [In most way my life is close to my ideal.](#)
- Strongly disagree 3 1 2
 4 5
6 7
- Strongly agree
- 15.10 [I am satisfied with my life.](#)
- Strongly disagree 3 1 2
 4 5
6 7
- Strongly agree
- 15.11 [If I could live my life over, I would change almost nothing.](#)
- Strongly disagree 3 1 2
 4 5
- Strongly agree

6 7

16. Job satisfaction

Please indicate the extent of your agreement with these statements by choosing the appropriate column. The columns are graded from 1 to 7. One (1) denotes strong disagreement with a statement, and at the other end of the scales, seven (7) denotes strong agreement with the statement.

- 16.1 [I am satisfied with my job in this business.](#)
- | | | | |
|--|---|-------------------|----------------|
| | <input type="radio"/> 1 <input type="radio"/> 2
<input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5
<input type="radio"/> 6 <input type="radio"/> 7 | Strongly disagree | Strongly agree |
|--|---|-------------------|----------------|
- 16.2 [I enjoy working in this business.](#)
- | | | | |
|--|---|-------------------|----------------|
| | <input type="radio"/> 1 <input type="radio"/> 2
<input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5
<input type="radio"/> 6 <input type="radio"/> 7 | Strongly disagree | Strongly agree |
|--|---|-------------------|----------------|
- 16.3 [I experience my involvement in this business as rewarding.](#)
- | | | | |
|--|---|-------------------|----------------|
| | <input type="radio"/> 1 <input type="radio"/> 2
<input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5
<input type="radio"/> 6 <input type="radio"/> 7 | Strongly disagree | Strongly agree |
|--|---|-------------------|----------------|
- 16.4 [I experience my involvement in this business as fulfilling.](#)
- | | | | |
|--|---|-------------------|----------------|
| | <input type="radio"/> 1 <input type="radio"/> 2
<input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5
<input type="radio"/> 6 <input type="radio"/> 7 | Strongly disagree | Strongly agree |
|--|---|-------------------|----------------|
- 16.5 [I am satisfied with the way that we work together in this business.](#)
- | | | | |
|--|---|-------------------|----------------|
| | <input type="radio"/> 1 <input type="radio"/> 2
<input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5
<input type="radio"/> 6 <input type="radio"/> 7 | Strongly disagree | Strongly agree |
|--|---|-------------------|----------------|

17. Demographic Information

The following questions solicit basic demographic data concerning you and

the ICT business in which you are employed. Please indicate your response in the appropriate numbered block as requested.

17.1 [Please indicate how long you have been employed by this ICT business:](#)

17.2 [Please indicate your gender:](#)

17.3 [Please indicate to which population group you belong:](#)

17.4 [Please indicate to what age group you belong:](#)

17.5 [Please make any comments or suggestions relating to the influence of organisational culture on the happiness level of employees in the ICT industry, and what you think can be done to improve their levels of happiness and job satisfaction :](#)

Thank you for your time and cooperation.

APPENDIX 3

TABLE OF ITEM PARCELLING

Parcel	Items		References
EMPOWR I	EMPOWR 1	In this business I make decisions at the level	Denison <i>et al.</i> 2006: 38; Yilmaz & Ergun 2008:

		where the best information is available.	303
	EMPOWR 2	In this business, I believe that I can have a positive impact.	Denison <i>et al.</i> 2006: 38; Yilmaz & Ergun 2008: 303
EMPOWR II	EMPOWR 3	In this business my efforts to take initiative is recognised.	Jyothibabu, Farooq & Pradhan 2010: 312
	EMPOWR 6	In this business, authority is delegated so that I can act on my own.	Denison <i>et al.</i> 2006: 38; Yilmaz & Ergun 2008: 303
EMPOWR III	EMPOWR 4	In this business, I have control over the resources needed to accomplish my work.	Jyothibabu <i>et al.</i> 2010: 312
	EMPOWR 5	In this business, I can influence the way work is done.	Menon 2001: 166
TEAM I	TEAM 1	In this business I work like I am part of a team.	Denison <i>et al.</i> 2006: 38; Yilmaz & Ergun 2008: 303
	TEAM 3	In this business teams are used to get work done.	Denison <i>et al.</i> 2006: 38; Yilmaz & Ergun 2008: 303
TEAM II	TEAM 2	In this business cooperation across different parts of the organisation is actively encouraged.	Denison <i>et al.</i> 2006: 38; Yilmaz & Ergun 2008: 303
	TEAM 6	In this business teams are rewarded for their achievement as a team.	Jyothibabu <i>et al.</i> 2010: 312

Parcel	Items		References
TEAM III	TEAM 4	In this business teams treat members as equals,	Jyothibabu <i>et al.</i> 2010: 312

		regardless of rank, culture, or other differences.	
	TEAM 5	In this business, teams revise their thinking as a result of group discussions or information collected.	Jyothibabu <i>et al.</i> 2010: 312
CAPA I	CAPA 1	In this business there is continuous investment in the improvement of my skills.	Denison <i>et al.</i> 2006: 38; Yilmaz & Ergun 2008: 303
	CAPA 2	In this business my capabilities are viewed as an important source of a competitive advantage.	Denison <i>et al.</i> 2006: 38; Yilmaz & Ergun 2008: 303
CAPA II	CAPA 3	In this business gaps between my current and expected performance are measured.	Marsick & Watkins 2003: 144
	CAPA 4	In this business the result of the time and resources spent on my training are measured.	Marsick & Watkins 2003: 144
CAPA III	CAPA 5	I often receive internal training.	Skerlavaj, Song & Lee 2010: 6400
	CAPA 6	I often receive external training.	Skerlavaj, Song & Lee 2010: 6400

Parcel	Items		References
CONSISTENT I	CONSISTENT 1	In this business there is a clear and consistent set	Denison <i>et al.</i> 2006: 38; Yilmaz & Ergun 2008:

		of values that governs the way I do business.	304
	CONSISTENT 2	In this business there is an ethical code that guides my behaviour and tells me right from wrong.	Denison <i>et al.</i> 2006: 38; Yilmaz & Ergun 2008: 304
CONSISTENT III	CONSISTENT 5	In this business the leaders and managers “practice what they preach”.	Denison <i>et al.</i> 2006: 38; Yilmaz & Ergun 2008: 304
	CONSISTENT 6	In this business there is a unique management style.	Denison <i>et al.</i> 2006: 38; Yilmaz & Ergun 2008: 304
	CONSISTENT 7	In this business there is a distinct set of management practices.	Denison <i>et al.</i> 2006: 38; Yilmaz & Ergun 2008: 304
CONSISTENT IV	CONSISTENT 8	In this business it is easy to reach consensus, even on difficult issues.	Denison <i>et al.</i> 2006: 38; Yilmaz & Ergun 2008: 304
	CONSISTENT 9	In this business there is a clear agreement about the right way and the wrong way to do things.	Denison <i>et al.</i> 2006: 38; Yilmaz & Ergun 2008: 304
CHANGE I	CHANGE 1	In this business, the way I do things is flexible.	Denison <i>et al.</i> 2006: 38; Yilmaz & Ergun 2008: 304
	CHANGE 3	In this business I am encouraged to try out new ideas.	Goldsmith 2011 :94

Parcel	Items		References
CHANGE II	CHANGE 2	In this business I respond	Denison <i>et al.</i> 2006: 38;

		well to competitors and other changes in the business environment.	Yilmaz & Ergun 2008: 304
	CHANGE 4	In this business I frequently improvise to solve problems when an answer is not apparent.	Goldsmith 2011 :94
CHANGE III	CHANGE 5	In this business new and improved ways to do work are continually adopted.	Denison <i>et al.</i> 2006: 38; Yilmaz & Ergun 2008: 304
	CHANGE 6	Different parts of the business often cooperate to create change.	Denison <i>et al.</i> 2006: 38; Yilmaz & Ergun 2008: 304
CUSTOM I	CUSTOM 1	Customer input directly influences my business decisions.	Denison <i>et al.</i> 2006: 38; Yilmaz & Ergun 2008: 304
	CUSTOM 3	Customer comments and recommendations often lead to changes in this business.	Denison <i>et al.</i> 2006: 38; Yilmaz & Ergun 2008: 304
CUSTOM II	CUSTOM 2	I constantly monitor my level of commitment and orientation to serving customer needs.	Deshpande & Farley 1998: 224
	CUSTOM 6	In this business we measure customer satisfaction systematically and frequently.	Deshpande & Farley 1998: 224

Parcel	Items		References
CUSTOM III	CUSTOM 4	Our business objectives are driven primarily by	Deshpande & Farley 1998: 224

		customer satisfaction.	
	CUSTOM 5	Our business strategy for competitive advantage is based on an understanding of our customers' needs.	Deshpande & Farley 1998: 224
LEARN I	LEARN 1	In this business learning is an important objective in my day-to-day work.	Denison <i>et al.</i> 2006: 38; Yilmaz & Ergun 2008: 304
	LEARN 2	In this business I try new business methods even if they may prove risky.	Skerlavaj, Song & Lee 2010: 6400
LEARN II	LEARN 3	In this business I am explicitly rewarded if I am a source of quality improvement.	Skerlavaj, Song & Lee 2010: 6400
	LEARN 5	In this business innovation are encouraged and rewarded.	Denison <i>et al.</i> 2006: 38; Yilmaz & Ergun 2008: 304
LEARN III	LEARN 4	In this business failure is viewed as an opportunity for learning and improvement.	Denison <i>et al.</i> 2006: 38; Yilmaz & Ergun 2008: 304
	LEARN 6	In this business, employees help one another to learn.	Jyothibabu <i>et al.</i> 2010: 312

Parcel	Items		References
VISION I	VISION 1	The vision of our	Denison <i>et al.</i> 2006: 38;

		business creates excitement and motivation for me.	Yilmaz & Ergun 2008: 305
	VISION 2	In this business I am able to meet short-term demands without compromising our long-term vision.	Denison <i>et al.</i> 2006: 38; Yilmaz & Ergun 2008: 305
VISION II	VISION 3	In this business, I am invited to contribute to the organisation's vision.	Jyothibabu <i>et al.</i> 2010: 312
	VISION 5	In this business short-term thinking often compromises our long-term vision (R)	Denison <i>et al.</i> 2006: 38; Yilmaz & Ergun 2008: 305
VISION III	VISION 4	The employees in this business have a shared vision of what the organisation will be like in the future.	Denison <i>et al.</i> 2006: 38; Yilmaz & Ergun 2008: 305
	VISION 6	In this business alignment of vision is built across different levels and project teams.	Jyothibabu <i>et al.</i> 2010: 312
MISSN I	MISSN 1	In this business I have a long-term purpose and direction.	Denison <i>et al.</i> 2006: 38; Yilmaz & Ergun 2008: 304
	MISSN 2	In this business there is a clear mission that gives meaning and direction to my work.	Denison <i>et al.</i> 2006: 38; Yilmaz & Ergun 2008: 304

Parcel	Items		References
MISSN II	MISSN 3	The strategy of this business leads other organisations to change the way they compete in the industry.	Denison <i>et al.</i> 2006: 38; Yilmaz & Ergun 2008: 304
	MISSN 4	In this business there is a clear strategy for the future.	Denison <i>et al.</i> 2006: 38; Yilmaz & Ergun 2008: 304
	MISSN 5	The strategic direction of our business is clear. (R).	Denison <i>et al.</i> 2006: 38; Yilmaz & Ergun 2008: 304
GOALS I	GOALS 1	In this business my progress is measured against stated goals.	Denison <i>et al.</i> 2006: 38; Yilmaz & Ergun 2008: 304
	GOALS 2	In this business I understand what needs to be done.	Denison <i>et al.</i> 2006: 38; Yilmaz & Ergun 2008: 304
	GOALS 4	In this business there is widespread agreement about goals to be achieved.	Denison <i>et al.</i> 2006: 38; Yilmaz & Ergun 2008: 304
GOALS II	GOALS 3	Work is organised so that I can see the relationship between my job and the goals of the organisation.	Denison <i>et al.</i> 2006: 38; Yilmaz & Ergun 2008: 304
	GOALS 5	In this business leaders set goals that are ambitious, but realistic.	Denison <i>et al.</i> 2006: 38; Yilmaz & Ergun 2008: 304
FAM I	FAM 1	In this business I am treated as a total person.	Tang <i>et al.</i> 2000: 546
	FAM 2	This business has a real interest in my welfare.	Tang <i>et al.</i> 2000: 546

Parcel	Items		References
FAM II	FAM 3	Management in this business encourage supervisors to be sensitive to my personal concerns.	Bradley, McDonald & Brown 2010: 11944
	FAM 4	In general, managers in this business are accommodating of my non-work needs.	Bradley <i>et al.</i> 2010: 11944
FAM III	FAM 5	This business tries to create a unique family atmosphere.	Tang, Kim & O'Donald 2000: 546
	FAM 6	In this business loyalty and dedication is emphasised.	Tang <i>et al.</i> 2000: 546
	FAM 7	Managers in this business are sympathetic towards employees' childcare responsibilities.	Bradley <i>et al.</i> 2010: 11944
COMMUN I	COMMUN 1	In this business, managers/supervisors encourage me to speak up when I disagree with decisions.	Tang <i>et al.</i> 2000: 546
	COMMUN 3	In this business managers value my ideas and inputs.	Tang <i>et al.</i> 2000: 546
COMMUN II	COMMUN 2	In this business I have the freedom to express my ideas.	Tang <i>et al.</i> 2000: 546
	COMMUN 6	This business emphasises open communication.	Tang <i>et al.</i> 2000: 546

Parcel	Items		References
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COMMUN III	COMMUN 4	In this business information is widely shared so that I can get the information I need.	Denison <i>et al.</i> 2006: 38; Yilmaz & Ergun 2008: 303
	COMMUN 5	This business uses two-way communication on a regular basis, such as suggestion systems, electronic bulletin boards, or town hall/open meetings.	Marsick & Watkins 2003: 144
ART I	ART 1	In this business, the physical environment (e.g. chairs, structure of offices and architecture) encourages me to be productive.	Self-generated from Schein 2010: 23
	ART 2	In this business, the physical environment (e.g. chairs, structure of offices and architecture) is conducive to my creativity.	Self-generated from Schein 2010: 23
ART II	ART 3	The physical environment in this business encourages me to exchange ideas.	Self-generated from The Australian Cooperation Research Centre for Construction Innovation 2001: 14
	ART 4	In this business there are restaurants or other areas where I can eat meals and/or interact socially.	Self-f generated from Chatterjee 2012

Parcel	Items		References
ART III	ART 5	The furniture in this business encourages my creativity.	Self-generated from Schein 2010: 23
	ART 7	In this business, the physical environment (e.g. chairs, structure of offices and architecture) encourages open communication among employees.	Self-generated from Schein 2010: 23
ART IV	ART 6	In this business there are rooms where I can relax.	Self-f generated from Chatterjee 2012
	ART 9	In this business there are sport or gym facilities.	Self-f generated from Johansson 2012
ART V	ART 8	In this business, free meals are provided.	Self-f generated from Chatterjee 2012
	ART 10	In this business there are facilitates that encourages recreational activities, such as playing darts and video games.	Self-f generated from Johansson 2012
ART VI	ART 11	In this business employees have an informal dress code.	Self-generated from Schein 2010: 23
	ART 12	In this business employees address each other on their names.	Self-generated from Schein 2010: 23

Parcel	Items		References
ART VII	ART 13	In this business, we have developed our own business/organisational language (e.g. in Google employees call themselves “Googlers”).	Self-generated from Johansson 2012
	ART 14	This business has well-known values, ceremonies and rituals.	Self-generated from Schein 2010: 23