

# **ICT and Skills Shortage: South African Case Study of Retaining ICT-Skilled Professionals**

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## **Abstract**

South Africa is currently experiencing a shortage of an estimated 70,000 plus information and communication technology (ICT) professionals, which is compounded by the fact that the number of information and communication technology (ICT) graduates is now showing a decline. At an organisational level, the effective use of ICT for organisational information management is difficult without having appropriately ICT-skilled (e-skilled) employees. The shortage of e-skills in South Africa and much of Africa forces companies to work at retaining their existing e-skilled professionals, but this task is becoming increasingly difficult. Thus, this study established the objective to explore the factors that contribute to the retention of skilled ICT professionals in one international consulting organisation in South Africa, which also might bear relevance to other similar organisations operating in many other African countries. This study aimed to show that identifying these retention factors would lead to a better understanding of effective ways to retain much needed ICT-skilled professionals in organisations in South Africa. The findings of this study can help organisations in South Africa (and possible in other African countries) to formulate effective retention strategies and also provide a base for further academic research in this field. This qualitative exploratory research was done by reviewing the pertinent literature in order to identify relevant retention factors and the subsequent empirical testing of these factors. For that purpose, a single case study methodology was deployed, embracing three levels of ICT professional: consultants, managers and directors. The reviewed literature elicited 15 factors influencing the retention of e-skilled professionals. After testing these factors with 25 professionals at Company A, it was found that the following five factors are the most important when deciding to remain with the company or not: compensation, promotional opportunities, empowerment, interpersonal relationships, and personal well-being. This suggested that the ICT professionals in Company A are overwhelmingly driven by the need for reward and personal well-being, thus confirming that they predominantly belong to the Theory X type and, philosophically, to the Rational-Economic beings.

**Keywords:** ICT professionals, human resources, e-skills, retention, financial services.

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## Introduction

*South Africa faces a major problem in its capacity to meet its challenges due to a substantial lack of e-skills and needs to develop a substantive integrated program to develop and retain these skills.*

*(e-Skills Summit, 2010)*

Current literature suggests that the role of human resources (HR) crucially influences the organisational competitive advantage. Staff turnover has become one of the leading challenges affecting numerous organisations (e.g., Camps & Luna-Arcos, 2008; Kochan & Dyer, 1993) as staff replacement comes at very high cost (Bureau of Labour, 2010).

In South Africa, it is a well-known that currently the country experiences a shortage of estimating over 70,000 ICT professionals. The fact that the supply side of the information and communication technology (ICT) graduates is now showing a decline makes the skills situation in South Africa even worse (Accenture, 2008; Birchwood Declaration, 2008; ITWeb, 2008; NeSPA, 2010). This general lack of ICT-skills (also referred to as e-skills) is seen by the National Government (notably, the Department of Communications) as a real impediment to South Africa meeting its commitment to building a Knowledge Society and executing the accepted international developmental programmes such as the Millennium Development Goals (MDGs) or the World Summit on Information Society (WSIS) Plan of Action. Information and communication technologies (ICT) related skills are also seen as crucial for the New Partnership for Africa's Development (NEPAD) and the execution of the South African Medium Term Strategic Framework (MTSF) (DoC, 2007; Medium Term Strategic Framework [MTSF], 2009; NeSPA, 2010, 2013).

At an organisational level, the effective use of ICT for organisational information management is impossible without having appropriately e-skilled employees. Developing and retaining e-skills needed for business success is a requirement as the capable workforce is considered as a '*powerful economic development tool*' (eSCC, 2004). It is then not surprising that the Human Resources (HR) strategy for many multinational organisations (such as the one described in this study) is to '*leverage the global talent pool wherever it exists*' (Lanvin & Passman, 2008) i.e., to hire and retain already trained professionals who possess instantaneously usable and transferable e-skills.

However, the African continent as a whole is '*on the move*' as the continent has been the second-fastest growing region in the world over the past decade (Fine et al., 2012). This fact and the shortage of e-skills forces companies to work at retaining the existing e-skilled professionals. In that regard, organisations *inter alia* offer '*appropriate training, implement effective staff appraisal systems and review their promotion procedures in order to motivate and retain such workers*' (Mavromaras et al., 2010, pp. 24-25). Another reason for organisations trying to retain existing e-skilled professionals is the fact that skilling (required for obtaining employment), and often necessary up-skilling or re-skilling (required perform a particular job) is a costly endeavour (Wilson, 2008). Retaining highly e-skilled professionals is even more complex and can be more costly as these professionals are in high demand all over the world (Skills Australia, 2011). Yet another reason for taking care of the currently employed highly e-skilled personnel lies in the fact that '*employers of ICT graduates find poaching and [so called] "brain drain" to be additional obstacles in acquiring and retaining suitably qualified ICT personnel*' (Calitz, 2010).

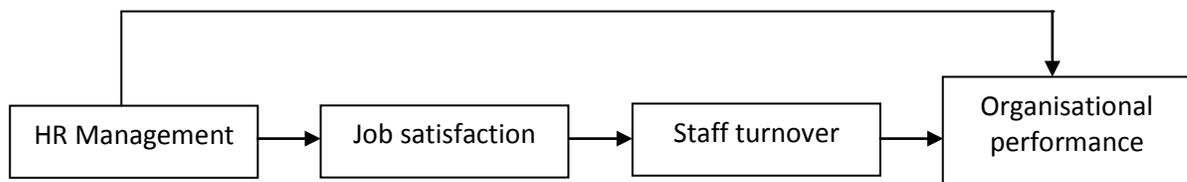
The situation in South African financial organisations, in general, and the international consulting company in Cape Town, which was the empirical setting of this study, in particular, is not much different. The researched organisation (here referred to as "Company A") has vainly tried to derive strategy for retaining e-skilled professionals, i.e. employees who are capable consulting,

marketing, integrating, supporting and servicing ICT systems (NeSPA, 2010, 2013). Thus, this study sets the objective to explore the factors that contribute to the retention of e-skilled ICT professionals. It was deemed that identifying these retention factors would lead to better understanding of an effective way of retaining these professionals by appropriately managing these factors. This can help consulting organisations in South Africa, and possibly in Africa, in formulating future retaining strategy. Our intention also was to use this study to form a base for further academic research in this field.

## Approach to this Study

This qualitative exploratory research, done in a setting where the researchers had little or no control over the events (Yin, 1994), was done by: (i) reviewing the pertinent literature and identifying relevant retention factors, thus helping this research to have ‘*strong grounding in theory*’ (MISQ, 2004), and (ii) the empirical testing of these factors in a consulting company. For that purpose the Case Study methodology was deployed in order to ‘*capture data on the perceptions of local actors from within*’ the researched organisation (Miles & Huberman, 1994: 6; Leedy, 1997).

The general conceptual approach to this study was based on the premise that the job satisfaction and staff turnover can have crucial impact on the HR management (HRM) and organisational performance. On the other hand, the HRM is directly responsible for hiring and retaining appropriately skilled staff in order to achieve organisational strategic objectives (Figure 1).



**Figure1: Relationships: HRM, Job satisfaction, Staff turnover and Organisational performance** (Source: Authors, based on Mudor & Tooksoon, 2011)

The research data for this project was gathered from participants across three employment levels: consultants, managers and directors and in their natural settings (Meredith, 1998). The data was gathered by conducting face-to-face interviews and disseminating a questionnaire. Twenty five (25) employees took part in the study – the sample that was considered as an appropriate representation of the ICT workforce within the ICT Risk department of Company A. This department was chosen as it contains the largest concentration of ICT professionals within Company A.

The Case Study approach to this research was selected in order to capture ‘*multiple knowledges*’ (Guba & Lincoln, 1994, p. 113) by collecting as reliable evidence as possible in order to create a narrative description of the situation being studied (Remenyi et al., 1998). In particular, the aim of this study was to expand understanding concerning the retention of ICT professionals in a financial consulting organisation – thus helping managers to create and execute an appropriate retention strategy. It is deemed that, in doing so, Company A would be able to retain its capability to effectively support its clients. The data collection was done through the questionnaire and interviews involving 25 respondents from the researched organisation. The questionnaire laid a good foundation towards getting and insight regarding the participants’ perceptions of employment levels, with regards to the staff retention challenges within the organisation. This was followed by 25 semi-structured interviews, which has given the authors more substantial understanding of the researched topic.

This paper is further structured as follows: the next section depicts the retention factors found in the pertinent literature; this is followed by the presentation of the empirical findings in the ICT Risk Department of Company A; the paper ends with the concluding remarks and recommendations.

## The Retention Factors Elicited By the Reviewed Literature

It is believed that an organisation's competitive approach in so called 'Information Age' inevitably depends on information, knowledge, ideas and management skills - thus resulting in the development of a new corporate paradigm highly dependent on employees and their skills (Gaylard et al., 2005). This paradigm shift caused that the ability to retain skilled staff becomes a strategic competitive business advantage. The successful organisational connections among their systems, strategies, support and clients are human drivers that are nowadays strategically connected (Cook & Jagers, 2005). The reviewed literature suggests that the personnel retention studies can be divided into two groups: (i) those favouring money and monetary incentives as the only significant motivator for workers (e.g., Brooke, 2003), and (ii) those claiming that personnel is motivated by satisfaction of their internal needs (e.g., Hofes-Alfeis, 2008). The research done in the South African context (Greenfield, 1993) favours the former approach stating that the vast majority of South African workers are motivated by money or material rewards rather than achievements, self-efficiency and the path of one's own behaviour. With reference to how the productivity of the workers could be increased, the results of Greenfield's (1993) and Brooke's (2003) studies confirmed that 96% of the companies surveyed believed that money was the most important motivating factor.

In order to examine the above hypotheses, the authors have explored a number of theories and models dealing with the retention of skilled workforce: for example, "Gender Principles", "Human Resource Management Approach", "Isolating factors", "Employee Retention", "Retention Theories", "Retention drivers: four philosophies of human nature", "Employee motivation", or "Historical perspectives of employee motivation". The aim of this endeavour was to identify the common retention factors and test their validity in the researched company. The factors deduced from these theories and models are given in Table 1.

**Table 1: The retention factors deduced from the reviewed literature** (Source: Authors)

Theory/Model	Factors	Authors
<b>Gender Principles</b>	<ul style="list-style-type: none"> <li>• <i>Needs Principle</i></li> <li>• <i>Socially Perceived Principle</i></li> <li>• <i>Cultural issues and values</i></li> </ul>	Adam, 2005
<b>Human Resource Management Approach</b>	<ul style="list-style-type: none"> <li>• <i>The motivational process</i></li> <li>• <i>The interaction process</i></li> <li>• <i>The visioning process</i></li> <li>• <i>The learning process</i></li> </ul>	DeMers, 2002
<b>Isolating factors</b>	<ul style="list-style-type: none"> <li>• <i>Location of the company</i></li> <li>• <i>Compensation</i></li> <li>• <i>Challenging and interesting job</i></li> <li>• <i>Company's reputation</i></li> <li>• <i>Career development</i></li> <li>• <i>Job security</i></li> </ul>	Ramlall, 2003 Moncarz et al., 2008 Walsh and Taylor, 2008 Clardy, 2005 Denton, 1994 Jike, 2003

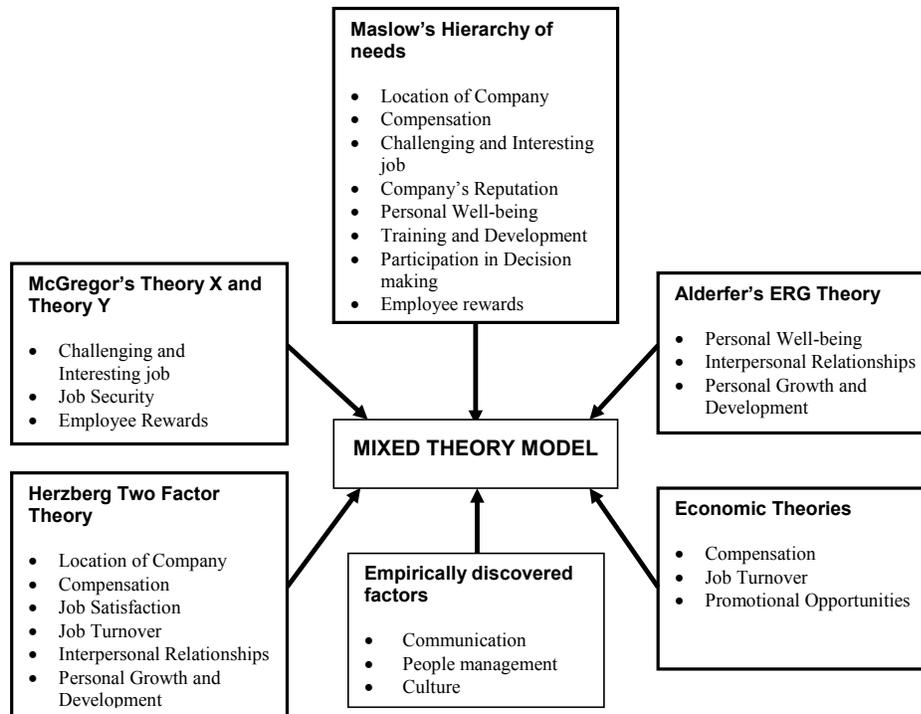
Theory/Model	Factors	Authors
	<ul style="list-style-type: none"> <li>• <i>Training and development</i></li> <li>• <i>Participation in decision-making (Empowerment)</i></li> <li>• <i>Attractive benefits</i></li> <li>• <i>Promotional opportunities</i></li> </ul>	
<b>Extrinsic motivators</b>	<ul style="list-style-type: none"> <li>• <i>Pay</i></li> <li>• <i>Comfortable and safe work environment</i></li> <li>• <i>Competence of leadership and resource provision</i></li> </ul>	Kaliprasad, 2006
	<ul style="list-style-type: none"> <li>• <i>Money</i></li> <li>• <i>Company shares</i></li> <li>• <i>Profit sharing as extrinsic factors</i></li> </ul>	Spector, 2000
	<ul style="list-style-type: none"> <li>• <i>Well-balanced workforce,</i></li> <li>• <i>Policies</i></li> <li>• <i>Rules</i></li> <li>• <i>Skills investment</i></li> </ul>	Lall, 2001
<b>Intrinsic factors</b>	<ul style="list-style-type: none"> <li>• <i>Worker's behaviours</i></li> <li>• <i>Worker's competencies</i></li> <li>• <i>Expectations</i></li> <li>• <i>Beliefs</i></li> <li>• <i>Morale values</i></li> </ul>	Wilson, 2008
	<ul style="list-style-type: none"> <li>• <i>Job restructuring</i></li> <li>• <i>Co-worker relationships</i></li> <li>• <i>Knowledge</i></li> </ul>	Hofes-Alfeis, 2008
	<ul style="list-style-type: none"> <li>• <i>Job insecurity</i></li> <li>• <i>Job satisfaction</i></li> <li>• <i>Loyalty</i></li> <li>• <i>Job turnovers</i></li> <li>• <i>Knowledge retention</i></li> </ul>	Lee-Kelley et al., 2007 Griffeth et al., 2000
<b>Employee Retention Constitutes</b>	<ul style="list-style-type: none"> <li>• <i>Rewarding employees for effective job performance</i></li> <li>• <i>Ensuring good working relationships between management and employees</i></li> <li>• <i>Maintaining a safe, healthy working environment</i></li> </ul>	Cascio, 2000 Heneman and Judge, 2003
<b>Traditional Retention Approach</b> (Include Trait Theory, Environmental Theory)	<ul style="list-style-type: none"> <li>• <i>Employee orientation and integration</i></li> <li>• <i>Career planning and development</i></li> <li>• <i>Employee relations</i></li> <li>• <i>Motivation</i></li> <li>• <i>Performance management</i></li> <li>• <i>Training and development</i></li> <li>• <i>Promotional opportunities</i></li> <li>• <i>Compensation and benefit programs</i></li> </ul>	Kaliprasad, 2006 Banerjee, 1995 Muchinsky, 1990 Sadri and Tran, 2002
<b>Retention drivers: four philosophies of human nature</b>	<ul style="list-style-type: none"> <li>• <i>Workers as rational-economic beings</i></li> <li>• <i>Workers as social beings</i></li> <li>• <i>Workers as self-actualising beings</i></li> </ul>	Beck, 1983

Theory/Model	Factors	Authors
	<ul style="list-style-type: none"> <li>Workers as complex beings</li> </ul>	
<b>Motivational theories</b>	<p><u>Maslow's Hierarchy of Needs</u></p> <ul style="list-style-type: none"> <li>Psychological factors</li> <li>Safety</li> <li>Belonging</li> <li>Esteem</li> <li>Self-actualisation</li> </ul> <p><u>Alderfer's ERG Theory</u></p> <ul style="list-style-type: none"> <li>Existence needs</li> <li>Relatedness needs</li> <li>Growth needs</li> </ul> <p><u>McGregor's Theory X and Theory Y</u></p> <ul style="list-style-type: none"> <li>need for security and reward (Theory X)</li> <li>freedom to do difficult and challenging work</li> </ul> <p><u>Herzberg Two Factor Theory</u></p> <ul style="list-style-type: none"> <li>Hygiene factors</li> <li>Motivator factors</li> </ul> <p><b><u>Economic Theories:</u></b></p> <p><u>Competition theory</u></p> <ul style="list-style-type: none"> <li>Remuneration dependent on supply and demand of skilled people</li> </ul> <p><u>Efficiency Wage Theory</u></p> <ul style="list-style-type: none"> <li>Higher salaries lead to higher level of performance and efficiency</li> </ul> <p><u>Human Capital Theory</u></p> <ul style="list-style-type: none"> <li>Talents and knowledge that workers are equipped with can be used to gain economic value (e.g. their skills can be used as a service, which will provide payment).</li> </ul>	<p>Kreitner, 1998</p> <p>Alderfer, 1969</p> <p>Spector, 2000</p> <p>McGregor, 1960</p> <p>Robbins, 1996</p> <p>Armstrong, 1996</p> <p>Kaliprasad, 2006</p> <p>Patten, 1977</p>

## Selection of the Relevant Retention Factors

The review of the pertinent literature showed that no-single theory or model encapsulates all retention-related factors. Analysing the above given factors, it is concluded that they can be grouped into particular clusters, as shown in Figure 2.

Since these factors are compiled from different theories and models, it was named as a '*Mixed theory model*', which served as a conceptual model for testing highly e-skilled staff retention perceptions in the Company A (Table 2).



**Figure 2: “Mixed theory” retention model** (Source: Authors)

**Table 2: The selected retention factors for testing in Company A** (Source: Authors)

Factor	Reference
Location of the company	Ramlall (2002)
Compensation	Zhao and Kay, 2008; Johnson, 2010
Challenging and interesting job	Walsh and Taylor, 2008
Company’s reputation and stability	Spector, 2000; Zuber, 2001; Clardy, 2005; Ongori, 2007
Personal well-being	Kaliprasad, 2004; Vather, 2008
Job security	Ramlall, 2004
Job satisfaction	Spector, 2000; Michaels, 2010
Job turnover	Griffeth, 2000
Training and development	Denton, 1994; Michaels, 2010
Participation in decision-making (Empowerment)	Ramlall, 2004; Jike, 2003
Promotional opportunities	Ramlall, 2004
Employee rewards	Gustafson, 2002; Heneman & Judge, 2003; Johnson, 2010
Working conditions	Zuber, 2001; Kaliprasad, 2004; Hart et al., 2007
Interpersonal relationships	Spector, 2000
Personal growth and development	Tran, 2002

The selection of the retention factors for the presented model was based on two criteria: (i) their commonality in the reviewed literature and (ii) manageability:

***Location of the company*** – This factor as described by Ramlall (2003) and viewed as most suitable to be managed through the provision of personal benefits such as individual offices or related monetary benefits (e.g. travelling allowance).

***Compensation*** – This is regarded as one of the most notable factors towards retaining staff (Moncarz et al., 2008). Managerial emphasis should be on ensuring a competitive wage system aligned to performance, standard of living, and level of employment.

***Challenging and interesting job*** – Walsh and Taylor (2008) noted that most employees committed to performing challenging work within challenging and conducive working environments, are the employees that are most likely to remain. Therefore, management should implement and facilitate well-structured rotation procedures and work processes, continuously enrich work tasks, promote intense working arrangements and promote cross-sectional working tasks.

***Company's reputation*** – With reference to the Herzberg Theory (Spector, 2000), a positive relationship between organisation's image and employees' satisfaction is crucial towards retaining staff (Clardy, 2005). Reputation is at best managed when organisations fulfil all their commitments and promises made to employees in terms of welfare and working conditions and to clients in terms of the quality of services delivered.

***Personal well-being*** – Satisfaction of employee's personal needs is crucial towards retaining employees. As discussed by the Maslow's Hierarchy of Needs Theory, people are never completely satisfied on any given need level, thus it is difficult for management to coordinate the personal well-being of an employee. Maslow states that the best way to manage this factor is to first determine what the employee's needs are, then satisfy those needs, and thereafter all external factors will be satisfied by the employee.

***Job security*** – Affiliated to the Maslow's Hierarchy of Needs Theory and McGregor's X/Y Theory, job security is an exceptionally strong factor and is properly and well managed through the provision of sustainable and beneficial employment contracts and well-organised working conditions and environment.

***Job satisfaction*** – As prominently explained and initiated through the Herzberg Two-Factor Theory and the assistance of various researchers and their research, it is widely accepted that competitive compensation structures, beneficial promotional opportunities, well-balanced employee benefits, effective career development initiatives and good working conditions are the most essential elements to properly coordinate in order to enhance job satisfaction among employees.

***Job turnover*** – Griffeth et al. (2000) maintain that job turnover is best managed through the relationship of pay and performance (higher the performance, higher the pay). Provision of various reward structures is vital, as is the creation of social community that will enhance social ties between employees.

***Training and development*** – Training and development (T&D) is considered a life-long learning provision approach (Denton, 1994). There are various avenues that are regarded as best T&D approach, but the most effective and efficient managerial approaches to T&D are in the forms of: (i) basic skills enhancements (improve and enhance internal skills, by cross-sectional training); (ii) targeted education, training or counselling (educative workshops, extra training courses and career counselling session); (iii) college and university options (improved skills and qualifications to improve living standards and satisfaction).

***Participation in decision-making (Empowerment)*** – In relation to Ramlall (2003) and the base provided by Jike (2003), decision-making participating efforts enhance performance and are well-managed through initiative exhibition sessions and also personal input in major decisions and discussions.

***Promotional opportunities*** – In correlation with job satisfaction, it is concluded that critical factors such as structural career opportunities, intrinsic job rewards and recognition were necessary to mitigate the risk of losing employees through unrealistic promotional processes (Ramlall, 2003). More specifically, the importance of moving the mature professional to a job which enables their experience, maturity and skill which have been developed over the years to be put into practice. Doing more applied, generalist work would provide more feedback, more sense of task identity, more variety and more feeling of task significance, all of which are critical in enriching a job and creating a sense of promotion.

***Employee rewards*** – The reviewed literature has shown that rewards as provided by organisations are closely linked to job satisfaction, and that it helps to motivate and retain competitive staff. Heneman and Judge (2003) argued that for organisations to retain its ICT staff, rewards must be matched to preference (match between rewards desired by employee and offered by the organisation).

***Working conditions*** – Relating to the Herzberg Theory (Spector, 2000) and interlinked to job satisfaction, working conditions are well-managed through the provision of flexible working hours, a fun working environment, ideal workspace and positive self-fulfilment.

***Interpersonal relationships*** – With reference to Alderfer's ERG Theory and Herzberg's Theory, relatedness is at most well-managed when management go beyond their job requirements to directly engage with staff members, share tasks among staff members, assign a peer to staff members if needed (e.g. development facilitating process), and invest in relationship building (social gathering).

***Personal growth and development*** – Based on individual perception and motivation, personal growth and development are dependent on the employee ability to self-manage and facilitate that growth. Sadri and Tran (2002) state that the most proper ways to handle the process are to improve career planning, provide a supporting work environment, and by helping the employee balance career and family issues by clarifying his or her priorities.

## **Empirical Findings**

The factors described above were presented to the respondents from Company A and they were asked to rank the factors according to their perception of importance. They were also asked to add to this list any other factor they deemed important for retaining ICT-skilled (e-skilled) professionals. Table 3 provides an indication of which factors were perceived to motivate the employees within the ICT Risk department to continue or end employment at Company A.

**Table 3: The participants ranked e-skills retention factors in Company A**

Importance ranking	Retention factor
1	Compensation
2	Promotional Opportunities
3	Empowerment (Participating in Decision Making)
4	Interpersonal Relationships
5	Personal Well-Being
6	Job Security
7	Employee Rewards
8	Job Turnover
9	Personal Growth and Development
10	Job Satisfaction
11	Challenging and Interesting Job
12	Training and Development
13	Working Conditions
14	Company's Reputation
15	Location of Company

The elaboration for prioritisation of these employee retention factors was as follows:

### **Compensation**

The study found that compensation factors (salary and bonuses) had the most influence on all the participants of the study, irrespective of their employment level. However, this factor also sparked some controversies. For example, at a director's level compensation was perceived as one of the top retention factors since they also receive bonuses as per their profit share. But this type of compensation was perceived by other management levels as a problem since these categories of respondents believe that *'directors just review the work but we put in all the hours and they get paid far more than us'...* and *'directors don't consider the financial needs of lower levelled employees'*. On the other hand, the respondents were not decisive whether decreased compensation would motivate them to leave the company.

It is noticeable that this finding confirms that the South African workforce predominantly belong to the Theory X type and, philosophically, to the Rational-Economic beings theory (Greenfield, 1993).

### **Promotional Opportunities**

Company A is a growing organisation with professional promotional opportunities, and offers realistic promotional options. It was, however, found that the promotion process was properly understood only at directorial and senior managerial levels. The interviewed consultants were not sufficiently familiar with the promotional process thus deemed it *'inconsistent and non-transparent'*. The promotions process is seen by the upper managerial level as a *'strategic tool'* and perceived to be professionally documented. They, however, admitted that it might be *'poorly*

*communicated to employees*’ as some employees ended their employment due to poor promotional decisions.

### ***Empowerment (Participating in Decision Making)***

Most of the managers and all of the consultants believe that most of the time they are excluded from structural and strategic decisions, which in turn affects their working performance. Despite the company’s top management denying it, the managers and consultants feel that this top-down decision-making approach at Company A allows directors to ultimately ‘*filter*’ decisions. Thus, managers and consultants feel somewhat unappreciated and inferior, which might lead to them leaving the company. This suggests that significantly involving the ICT-skilled professionals in the decision-making processes would improve their sense of contribution towards the company’s goals – thus, increasing their wish to stay with the organisation.

### ***Interpersonal Relationships***

Most interviewees feel that the relationship between employees (regardless of the level) is inadequate. They argued that this might be due to the fact that ICT Risk department is a merger between two legacy departments at Company A. This indicated a need for an organisational culture shift and different working styles. The interviewed consultants also believe that the directors and senior managers are generally too busy to communicate with lower levelled employees. This causes, they believe, poor performance feedback, and perceived superior attitudes by management towards lower level staff. This makes them feel very inferior, thus developing a sense of resentment towards managers, and especially directors. The directors’ and managers’ ‘*superior attitude*’ towards them might prompt the consultants to think about leaving the company.

Here is significant the appearance of two additional factors that might have a bearing on the Company A’s workforce retention decision-making: ***culture*** and ***communication***. These factors, not explicitly mentioned in the reviewed literature, will be discussed shortly.

### ***Personal Well-Being***

All interviewed employees felt they needed to be treated with respect at their workplace and a lack of respect, therefore, will generally interfere with their working relationships with others. Directors and managers felt that lower level staff do treat them with respect when it is work related, but socially they perceive lower level staff as somehow distant and unapproachable. This situation is related to employment hierarchy, since lower level personnel (mainly consultants) feel intimidated and inferior to directors and managers: ‘*We don’t feel comfortable in the presence of directors and managers, and therefore we ignore them to an extent. This is due to the fact that they present superior attitudes towards us*’. Consultants also argue that management is not very supportive of them generally, and it is mostly the consultant’s task to approach management to inquire about their professional progress and well-being. Since this factor was ranked 5<sup>th</sup> most significant retention factor, it is highly important to appropriately attend to the employees’ well-being as many of the respondents stated that they will leave the company if they are not treated with respect regarding their professional and personal progress.

### ***Job Security***

The future and progress are very important factors when working for a financial institution - especially when an employee is still in the training phase, when permanent employment is still uncertain. Therefore, employment security is a very important factor for most of ICT Risk

consultants. On the other hand, directors and managers stated that they are satisfied with the employment contract and the overall employment security that Company A offers.

Apart from security and contracts, most managers are not satisfied with the performance feedback process, which sometimes impacts on professional development and delayed promotional opportunities - thus, influences a job security. The interviewed consultants feel that top management is often more focused on the business than on the professional development of staff. They feel that there is no formal and concrete communication between the employees and the Human Resources regarding contract negotiations and performance feedback, which influences their perception of job security. This makes job security one of the most probable retention decisive factors for e-skilled employees at Company A.

### **Employee Rewards**

Employee rewards is a sensitive issue which involves great debate at Company A every year, but still does not deliver the expected results to the consultant level employees. While the interviewed directors and managers have pointed out the significance of this retention factor, the consultants believe that, due to the improper work timescales, they dedicate a lot of their free time to work but are not authorised to charge overtime: *'Management plans and requires the work when they please regardless of what one's workload is like, which is unfair'*. The interviewed consultants are also becoming frustrated with the fact that Company A continually expects them to acquire new skills, and it is not clear whether this is considered in the salary review process. Furthermore, the interviewed consultants experienced that employee rewards in the form of bonuses are reserved for selected top performers, which creates a spirit of unfair employment and progress. They believe that their performance can be affected by an array of occurrences outside of their control but these occurrences are not considered when Company A does its performance reviews.

### **Job Turnover**

The study found that at a director's level the job turnover factor is of minimal concern since their compensation levels are directly linked to the firm's financial situation and not solely their individual performance. Apart from their compensation, directors are not required to do unpaid work. They have indicated that their compensation is *'sustainable'* - thus prompting them to stay rather than to look for new job opportunities. On the other hand, job turnover as a retention factor is more important to the interviewed managers since their performance is directly linked to their compensations. In order to avoid the job turnover, many of them have to undertake *'underpaid'* work. This was similar for the interviewed consultants. They stated that they are forced to work on unpaid jobs as *'the work needs to be completed even if budget was reached'*. This challenge causes an unfavourable situation on a director and management level, which results in unwonted job turnovers. The fact that Company A finds it difficult to retain employees on a consultant level, partially due to this factor, gives this factor a significant prominence.

### **Personal Growth and Development**

Company A offers good career planning initiatives regarding the career and skills development. For example, there are a number of courses offered in this regard. However, the main problem appears to be the situation when most employees sign up for these courses but *'never get the chance to attend these courses'*. This causes a delay in the employees' skill development and minimises their opportunities to *'get exposed to different working tasks and also promotional opportunities'*.

Growth and development structures are in place at Company A, but it is the responsibility of the employees to drive their own growth and progress (though with the guidance of a mentor). This

particularly frustrates employees at the consultant and management levels since the company's top managers have to still approve the attendance to these skills development courses. As this is deemed important for the career development and growth of the employees at all levels, this can be one of the decisive factors for staying or leaving the company.

### **Job Satisfaction**

It was found that ICT Risk employees receive good technological resources and equipment. Most employees also get planned on a variety of tasks and projects, but the situation of work overload may arise when work becomes repetitive (same tasks and projects) because of the staff numbers (low in this case) and high client demands. To an extent employees can work flexible hours, pending that all related parties, Company A's clients and employees, are well informed and approval is granted.

Generally, most employees are satisfied with the nature of their work, but certain employees that perform specialist work still argue that the supply and need of specialised equipment should be strongly motivated because this process is mostly money driven, and not professionally driven. Generally, e-skilled specialists feel that Company A could be more work-driven than money-driven when specialist equipment is required, as this will enable them to complete tasks and projects more efficiently, effectively and be less time consuming.

### **Challenging and Interesting Job**

Most interviewed employees feel that their work is highly challenging and interesting, but this situation is also dependent on the level of employment and the area of specialisation. This was particularly the perception at the junior consultant's level as most of them indicated that on every project they learn '*new and interesting things*'. At the senior consultants' level situation is similar:

*"...our work is really dull at times, but thanks to the vibrant ICT environment of the client we do find some sense of interest. Audit support is becoming second nature now, and this worries me because I feel I need to get more exposure to different tasks."*

The interviewed managers and directors shared the senior consultants' sentiment.

There were some consultant, specialising in one area of expertise, who felt that their work at times is not challenging enough due to the extent of repetition encountered when carrying out tasks and projects. It was, however, concluded that these retention factor do not bear high significance for Company A.

### **Training and Development**

Company A's Training and Development policies and processes are outlined with immense detail. This, however, does not mean that it is properly managed. Except at a director's level, it is argued throughout ICT Risk that not enough training initiatives are being promoted and that the communication process with regard to training and development is poor. In one of the interviews, one of the employees stated that

*"we always complete training development work papers to indicate what workshops or courses we should be taking part in. But we never get to go on these courses due to various internal reasons that are out of our control."*

The interviewed employees believe that if you don't drive the process yourself, you will stagnate within your existing employment level along with your existing skills. However, this factor did not appear as highly significant for the respondents in this study. But analysing this retention factors together with the factor of the personal growth and development, it can be concluded that

these factors combined together can bear much more significance in employees' decision to leave company or stay.

### **Working Conditions**

Company A has a good, safe and relaxed working environment. Directors have their enclosed offices, managers have their enclosed cubicles, and senior consultants have either their own cubicles or share the open plan work desks with other consultants. Although the level of privacy can be deemed as low, this factor appeared as not significant for the retention decision. Since consultants perform most of their work at the client's offices, any non-crucial changes in the working environment at Company A will have minimal effect on the retention of the e-skilled staff.

### **Company's Reputation**

Company A has an overall good reputation within the industry, among its competitors and clients. They also have a good social responsibility reputation, and serve the community with great interest. To enhance and potentially improve internal ICT operations, the IT Risk Department has implemented a three-year IT Growth Plan, aimed at industry leadership in its area of specialisation. It is deemed that this should greatly boost the IT Risk's reputation within the industry. As noted during the interview process, all employees agreed that Company A has a 'good' reputation amongst competitors and within the industry; therefore, they are '*proud to be associated with it*'.

### **Location of Company**

Interviewees indicated that the physical location of Company A's offices forms part of their employment structure and is regarded as having minimal influence on their motivation to leave or stay at Company A. The location of Company A's offices serves no potential employment challenges as some of the employees rate the location beneficial in the sense of convenience, ease to access and safety. The company location is the least important for the consultants' level employees as most of their work is done at the client's premises.

A minority of employees do feel that it is unsafe and time consuming to travel to work because they live far from the offices and are sometimes forced to use public transport, which is still challenging in many localities of the Cape Town metropolitan area. Some respondents also feel that it is difficult at times to travel from work to client, and vice versa, but they still admitted that the location of the Company A's offices will not motivate them to end employment with Company A.

### **Additional Retention Factors**

As already mentioned, the analysis of the interviews elicited some additional retention factors: Communication, People Management, and Culture.

### **Communication**

IT Risk has a good understanding of operational processes and policies at a senior management level. It was noted that senior management along with the Human Resources do not properly and effectively communicate various important guidelines and processes to lower level staff within IT Risk. For example, the promotions process, bonus awarding process and the performance feedback are marked by the respondents as insufficient. This was also evident during the data collection process (interviews and completion of questionnaires) as many respondents at the consulting level either misunderstood or did not understand various processes at all. As this issue

influences their everyday work and the long term progress, the consultants believe that better communication will improve both. Lower levelled staff should also consider that they should make senior management aware that they do not understand certain processes, hence requiring more effective communication. As this was perceived as a crucial retention issue, it should be addressed with due attention by the Human Resources and IT Risk within Company A as this retention factor was ranked as 3<sup>rd</sup> most important.

## People management

The interpersonal relationships as well as the levels of respect within IT Risk are of low standards. It can be argued that this is influenced by the employment levels and levels of responsibility, thus causing certain individuals to undermine the employment levels of others as well as undervaluing others. People management at Company A has not set official boundaries or hierarchy. It is the role of management to handle and treat staff as professionally and respectfully as possible. But it is also the role of employees to treat management with the needed respect and professionalism. The *People management* retention factor was ranked 4<sup>th</sup> (together with Interpersonal Relationships) as the respondents overwhelmingly stated the importance of managing the staff as professionally and respectfully as possible.

## Culture

At the time of this study, there was an inadequate state of culture within IT Risk, which arguably stems from the merger between two legacy departments at Company A. This essentially was a merger of a diverse workforce culture and management styles. This brought about a need for the cultural shift in operations and different working styles, having to melt and form a new working experience and culture. And this did not happen or, at least, did not happen as expected. The culture as the retention factor is interrelated with the factors such as Personal Well-being and Interpersonal Relationships, thus can have a negative effect on skilled employees' performance and their wish to retain in the company. Consequently, the *Culture* retention factor was ranked as 5<sup>th</sup>, bearing a very high importance regarding the staff motivation to end employment at Company A or to stay.

## Conclusion

This study originated against the backdrop that with a shortage of about 70 000 ICT-skilled professionals in South Africa, a serious challenge was presented to every organisation that depends on the expertise of these professionals. Hence, this study was undertaken aimed at exploring the reasons that would impact the decision of ICT-skilled (e-skilled) professionals to remain in the current organisation or not. The main objective was to explore the factors that possibly contribute to the retention of ICT professionals as it was deemed that identifying these factors would lead to better understanding of ways for retaining these e-skilled specialists, thus avoiding the fall in the organisational performance and incurring unnecessary costs for new employments. In that regard, the pertinent literature was reviewed and found 15 major retention factors, which we subsequently tested in an international financial organisation (Company A) operating in Cape Town, South Africa. The empirical study elicited another three factors that were not explicitly mentioned in the reviewed literature.

Ranking the 18 identified retention factors, it has been concluded that the interviewed e-skilled professionals at Company A were the most concerned about: (i) compensation (remuneration), (ii) promotional opportunities, (iii) empowerment (associated with the decision-making), (iv) interpersonal relationships, (v) personal well-being and (vi) job security. This showed that in the South African workforce the retention factors have not changed in last two decades. In his research in 1993 Greenfield found that the South African workforce predominantly belong to the

Theory X type and, philosophically, to the Rational-Economic beings. In other words, the interviewed e-skilled professionals in Company A were overwhelmingly driven by the need for reward, well-being and security (Greenfield, 1993). In terms of the theories based on needs, this study very much relate to the Alderfer's ERG Theory (based on Maslow's Hierarchy of Needs theory), which has established the following hierarchy (Kaliprasad, 2006):

- *Existence needs*: classified as the desire for physiological and material well-being.
- *Relatedness needs*: those needs that satisfy the interpersonal relationships, and
- *Growth needs*: describe those desires for continued personal growth and development.

Analysis of these six factors showed that all of them belong to this hierarchy, hence confirming that e-skilled workforce is largely rationally driven by tangible rewards.

Theoretically, boundaries of this research are modally qualified by the results pertaining only to the researched company (Gregor, 2006) but can be relevant to other companies of the same type and circumstances. The authors believe that the findings of this study might be useful for planning the HR strategies in the researched and similar organisations. The authors also deem that the results of this study can be used as a conceptual base for similar studies. However, it is also important to state that further research on this broad topic should be undertaken. In that regard, it would be beneficial to explore, for example, how the emerging concept of "bring your own device" (BYOD) influences retention of skilled ICT personnel or how the immigration regulations impact supply and retention of skilled ICT professionals.

Acknowledging inevitable limited generalisation of the results of this single case study, it is hoped to obtain a feedback from other researchers and practitioners in order to prepare a more informed base for future studies in other empirical environments in South Africa and possible similar countries that struggle with the retention of ICT professionals.

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