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# **Gordon Institute of Business Science**

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## **Employee engagement as the moderator of the relationship between psychological contract breach and perceived supervisor support; and the intention to quit**

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## **Abstract**

Objective: This research intends to add to the understanding of the various factors that influence an employee's intention to quit an organisation. Increasingly globalised markets and global competition have demanded that organisations retain scarce human resources. The moderating effect of an employees' level of engagement on the relationship of an employees' level of psychological contract breach and perceived supervisor support with the productivity outcome of the employees' intention to quit the organisation is examined to deepen the understanding of the relevance and inter-relationships of these factors.

Methodology: This quantitative explanatory study considered the level of an employees perceived supervisor support and psychological contract breach as the predictor of their intention to quit and their level of employee engagement as the moderator of the variable relationships. The study obtained 449 responses from the employees in the Johannesburg based business unit of a South African company. The Pearsons product moment correlation coefficients were observed to identify the extent of the relationships and a stepwise multiple regression analysis gave insight into which of the independent variables explained more of the variances in ITQ. Finally a two-way ANOVA was used to check for interaction to determine the moderating effect of EE.

Outcome: The level of an employee's engagement, perceived supervisor support and psychological contract breach were observed to have significant relationships with their intention to quit the organisation in this study. The level of employee engagement was not observed to significantly moderate the relationship of their perception of supervisor support and psychological contract breach with their intention to quit the organisation. This suggests that the relationship of an employees' level of perceived super support and psychological contract breach on their intention to quit does not vary depending on their level of employee engagement.

## **Keywords**

Employee engagement, perceived supervisor support, psychological contract breach

## Declaration

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



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Kesavan Naicker

11 November 2013

Date

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1. Survey Questionnaire

# 1. Introduction to research problem and purpose

## 1.1 Introduction

Organisations, especially those in emerging markets, have recently had to adapt to increasing levels of international competition, de-regularisation, and increasingly global markets whilst responding to continuously changing customer demands (Baek-Kyoo, 2010; De Vos & Meganck, 2013; Pepe, 2010; Sahoo & Mishra, 2012). They require committed and engaged employees who remain with the organisation as these are considered to be critical to the success of the organisation and are essential to maintaining a competitive marketplace advantage (Agarwal & Bhargava, 2013; Hsieh, 2012; Macey & Schneider, 2008; Pepe, 2010; Sahoo & Mishra, 2012). Organisations thus need to have workforces that can adapt to changing situations and face challenges (Baek-Kyoo, 2010; Kanaka, 2008).

Emerging market companies face intense competition for semi-skilled to mid management employees (De Vos & Meganck, 2013; Newman, Thanacoody & Hui, 2012) which is further compounded by the low supply of these resources (Wöckel & Heymann, 2012). The competitive advantage of these organisations are at risk especially when exposed to the challenges of retaining limited their skilled resources that are in demand in domestic and global labour markets (Lockwood, 2007). These employees develop skills and expertise that they can transfer easily from one organisation to another (Inkson & King, 2010)

Managers agree that this century demands more efficiency and productivity from workers who have increasing technical and professional skills (Markos & Sridevi, 2010). It is viewed as critical to improve employee productivity through reduced absenteeism, increased effort and retention (Pepe, 2010). Key resources specifically should also be made less prone to leave which reduces the associated turnover costs and improves an organisations' profitability (Baek-Kyoo, 2010; Hellman, 1997). It can be surmised that improved employee productivity could offset the prevailing lack of skills. Engaged employees, who are happy with their supervisors, jobs and organisations, who are investing additional discretionary effort are a competitive advantage that is not easily replicated by competitors (Lockwood, 2007). This requires employees who are fully committed to the organisation emotionally, cognitively and behaviourally (Kahn, 1990). This study aims to build on recent research on employee engagement (EE), perceived supervisor support (PSS) and psychological contract

breach (PCB) by examining their inter-antecedent relationship with the key organisation outcome of the employees intention to quit (ITQ).

Economic uncertainty and the challenges of being profitable has created an organisational environment characterised by downsizing (Lapalme, Tremblay & Simard, 2009; Turnley & Feldman, 2000), retrenchments and internal competition for resources resulting in reduced levels of employee engagement. Management behaviours becomes one of preserving their positions, proving their worth and being closed off to staff which results in a distrustful environment (Pech, 2009). Thus it is vital to understand and manage leadership behaviour as represented by the employees' perception of supervisor support and employee expectations as defined in the psychological contract to prevent the erosion of employee engagement levels and an increased intention to quit by the employee.

Research suggests that improved employee engagement, perceived supervisor support, reduced psychological contract breach and reduced intentions to quit are highly dependent on an organisations committed leadership (Baek-Kyoo, 2010; DeConinck & Johnson, 2009; Elçi, Şener, Aksoy, & Alpkın, 2012; Haggard, 2012; Mahdi et al., 2012; Pepe, 2010; Sahoo & Mishra, 2012; Saks, 2006) while Kinjerski & Skrypnik (2006) found that the spirit at work is established by the leaders because they give it form.

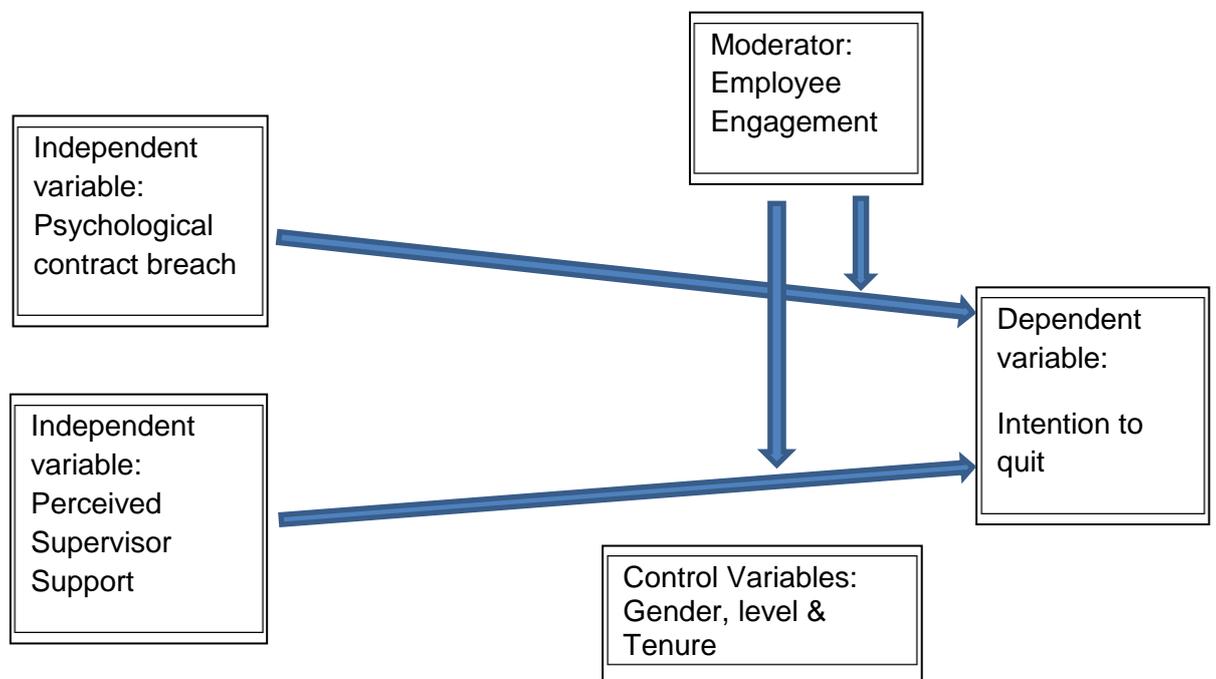
Despite the high profile of employee engagement and turnover in management discussions there is a concern about the prevailing low levels of engagement and high turnover in many countries (Arkoubi, Bishop & Scott, 2013; Robertson & Cooper, 2009; Wöcke & Heymann, 2012). There has been considerable research on the drivers and antecedents of employee engagement including perceived supervisor support (PSS) and psychological contract breach (PCB) but little on the situational and individual variables that influence an employee's response (Argawal & Bhargava, 2013) and ultimately their intention to quit the organisation.

## **1.2 Purpose of this study**

This study will critically examine the relationship effect of PCB and PSS on the productivity indicator ITQ and the moderating effect that the level of employee engagement has, as a third variable, on these relationships as illustrated by the conceptual framework in figure 1, in a new emerging economy geographical context and in so doing intends to add to the current theory on employee engagement, PSS,

PCB and ITQ. The antecedents of employee engagement are extensively covered in literature and among these is the requirement for a supportive leadership (Argawal & Bhargava, 2013). However, even if leadership is fully committed any breach of the tacit expectations of the employee may result in a PCB and this together with PSS could have a combined influence on the level of employee engagement. The PCB framework is useful for understanding the individual-organisation relationship as it considers the individual nature of the employee – organisation relationship (Argawal & Bhargava, 2013). EE will be investigated in its role as a moderator noting that a moderator is defined as a third variable that affects the relationship of a predictor variable, in this case PCB and PSS, with the independent variable being ITQ (Baron & Kenny, 1986).

**Figure 1: Conceptual Framework**



### 1.3 Research problem

With the recognition of the high costs of turnover there has been significant effort by researchers to deepen the understanding of the factors that affect ITQ (Baek-Kyoo, 2010; Wöcke & Heymann, 2012). Literature confirms that PCB and PSS are significantly related to the level of employee engagement which in turn is related to the

intent of an employee to quit; however, there is little literature on the interaction that EE has with relationship of PCB and PSS with ITQ. Research has extensively covered the drivers and antecedents of EE and ITQ but the situational and individual variables that influence an employees' response have not been significantly investigated to a level that provides adequate insight (Argawal & Bhargava, 2013). Researchers are consistent with their view that the constructs of EE be further investigate to understand its inter antecedent relationships with factors that predict ITQ.

## **2. Literature review**

### **2.1 Management Relevance**

Literature confirms that EE, PCB and PSS are a key determinants of organisation outcomes including ITQ (Baek-Kyoo, 2010; Bal, Chiaburu, & Jansen, 2010; Turnley & Feldman, 2000). Sahoo and Mishra (2012) surmise that employee engagement is significantly related to discretionary effort and the intention to quit and as a result affects the bottom line through HR related activities of training, recruitment, and retention initiatives and through wider impacts on productivity and profitability. They suggest that managers must nurture the two way relationship between employee and employer in order to improve employee engagement levels and as a result reduce ITQ.

An individuals' intention to quit is a reflection of their perceived experiences and attitudes to the organisation and job (Turner & Chelladurai, 2005). Despite the acknowledgement of the critical role that employee engagement plays in achieving organisational success it has remained a challenge for management (Elçi et al., 2012; Markos & Sridevi, 2010; Pati & Kumar, 2010; Robertson & Cooper, 2009; Sahoo & Mishra, 2012; Shuck, Reio & Rocco, 2011; Swaminathan & Rajasekaran, 2010). Researchers estimate that some organisations have disengagement figures of over 80% and suggest that employees are reluctant to share information because of distrust of management and feelings of vulnerability (Pech, 2009).

There is considerable theory available on employee engagement and organisations usually have the development of this as a key strategy but it is not effectively implemented by management. Pech (2009) suggests that organisations will claim to implement employee engagement programs but will deliberately fail to do so resulting in increased levels of PCB. Employee participation as a strategy for improving employee engagement is not readily accepted by the managers who have to implement it. They fear that greater employee involvement will threaten their jobs (Pech, 2009). This is further compounded by the existence of PCB as a norm in most organisations (Argawal & Bhargava, 2013; Turnley & Feldman, 2000). It is thus likely that the constructs of PCB and PSS have an interrelated influence on ITQ with employee engagement. Bakker, Albrecht and Leiter (2011) suggest that organisations remain competitive when they monitor and manage known causes of engagement. As the value of the company shifts from tangible asset to intellectual assets the need for study on engagement has become increasingly important (Inkson & King, 2010; Swaminathan & Rajasekaran, 2010).

## **2.2 Employee Engagement**

Employee engagement is a relatively recent construct that has evolved from earlier concepts including job satisfaction, motivation, effectiveness, organisational citizenship behaviour and employee commitment (Macey & Schneider, 2008; Markos & Sridevi, 2010; Sahoo & Mishra, 2012; Swaminathan & Rajasekaran, 2010). Engagement at work was conceptualised by Khan (1990) as the harnessing of employees to their work roles (Sahoo & Mishra, 2012). Sahoo and Mishra (2012) advance that employee engagement is characterised by the level of commitment and involvement that an employee has towards his or her organization.

There are three approaches to employee engagement in literature (Pati & Kumar (2010) comprising of Role Theory (Khan 1990), . Burnout approach (Maslach & Leiter 2008) and Social exchange theory (Saks 2006) Role Theory proposes that personal engagement is the harnessing of oneself to your work role (Pati & Kumar, 2010). Peoples express themselves physically, emotionally and cognitively during role performances (Khan 1990). The Burnout approach suggests that EE is the opposite of burnout and that the employee engagement characterisations of energy, involvement and efficacy are the opposite of the burnout dimensions of exhaustion, cynicism and inefficacy. Schaufeli et al. (2002), however, argues that these two concepts are not perfectly negatively correlated with each other and cannot be considered as the opposite of each other. They suggest that employee engagement is characterised by vigour, dedication and absorption and the scale developed by them to measure EE reflects this characterisation.

Social exchange theory (SET) is the dominant framework for theories in organisational behaviour (Bal, Chiaburu, & Jansen, 2010; DeConinck, 2010; Turnley & Feldman, 2000). Social exchanges involve the voluntary actions by individuals and involve unspecified obligations as opposed of economic exchange which is the transactional part of the employment contract (Bal, et al., 2010; DeConinck, 2010). SET involves the two facets of trust and fairness in comprehending employee attitudes (DeConinck, 2010). Trust is gained between the parties through reciprocal interactions and fairness improves the level of trust.

### **2.2.1 Definition**

There are varying definitions of employee engagement in literature. Employee engagement is defined by some researchers as the level to which employees are fully involved in and committed to their work, mindful of their organisation and colleagues

and are willing to extend themselves and provide extra effort for their company to ensure its success (Sahoo & Mishra, 2012).

Employee engagement is further described as extent to which employees are enthusiastically committed, on a behavioural, cognitive and emotional level to the values and goals of the organization (Baldev & Anupama, 2010; Swaminathan & Rajasekaran, 2010). The outcome of employee engagement is the exhibiting of discretionary effort, reflected in extra time, brainpower and energy; and the reduced intention to quit (Sahoo & Mishra, 2012; Saks, 2006; Shuck, Reio & Rocco, 2011).

Markos and Sridevi (2010) elaborate that employee engagement is different to organisation commitment and organisation citizenship behaviour (OCB) because of its 2 way nature and the extent to which engaged employees are expected to have an element of business awareness. Engaged employees are emotionally attached to their organisation and highly involved with enthusiasm for the success of their employer. Bakker, Albrecht and Leiter (2011) describe it as an employees' positive and high arousal affective state characterised by energy and involvement. This study interprets from literature that employee engagement is the positive emotional, behavioural and cognitive attitudes that creates enthusiastic voluntary and discretionary employee effort for the benefit of the organization.

Early academic literature focused on the roles employees filled at work (Kahn, 1990). At that point there was little focus on how employees filled these roles to different extents (Kahn, 1990). Companies are expecting more from their employees who in turn are expecting better working conditions, equitable pay, fair appraisal and better opportunities for career advancement (Sahoo & Mishra 2012).

This has more recently been developed in the concept full engagement which encompasses the psychological wellbeing of an employee (Robertson & Cooper 2010). Robertson and Cooper (2010) note the relevance of the employees' psychological wellbeing influence on EE. The factors noted by them in the definition of full engagement highlight the relevance of the employees' perception of psychological contract breach.

Kahn (1990) noted that people apply themselves to varying degrees on a physical, cognitive and emotional level. He described these variations as personal engagement or personal disengagement. Personal engagement occurred when people employed and expressed themselves physically, cognitively or emotionally. With disengagement

people withdrew physically, cognitively or emotionally (Kahn, 1990). Three psychological conditions were identified as determining the extent of engagement or disengagement. The first was psychological meaningfulness which is the extent which people feel worthwhile, useful and valuable in their roles. These required tasks that were challenging, clearly delineated, varied, creative and autonomous, roles that had influence and a desirable status and work interactions that include rewarding interactions with co-workers (Khan, 1990). The second was psychological safety which is feeling able to show and express ones' self without fear of negative consequences. The third was psychological availability which is the sense of having the physical, emotional or psychological resources to engage in the role.

### **2.2.2 Drivers of employee engagement**

Sahoo and Mishra (2012) identified the potential employee engagement antecedents as job characteristics, intrinsic/extrinsic rewards, organizational/supervisor support and distributive/procedural justice. They further proposed that the key drivers are career development, empowerment, fair treatment, pay and benefits, communication, image, performance appraisals, health and safety, cooperation and family well-being. The inclusion of the external dynamic of the employees' family wellbeing is significant as Khan (1990) identified an individuals' outside life as having the potential to psychologically take them away from their role performances.

Baldev and Anupama (2010) concluded that situational factors are more critical than the personal attributes of the employees in influencing employee engagement. These were objectivity and recognition for organizational commitment, career opportunity and pay for job involvement. As a result this study will focus on PCB and PSS as the relevant factors that interact with employee engagement of ITQ

### **2.2.3 Benefits of employee engagement**

Sahoo & Mishra (2012) advanced that the benefits of employee engagement are that employees stay with the company, become advocates, perform better, are linked to improved profitability and form an emotional connection to the company. The consequences of employee engagement are job satisfaction, organisational commitment, low intention to quit (Baek-Kyoo, 2010; Macey & Schneider, 2008) and organisation citizenship behaviour. Engaged employees have high levels of performance which is linked to profitability (Swaminathan & Rajasekaran , 2010).

Employee engagement is a critical driver of business success (Macey & Scheider, 2008; Markos & Sridevi, 2010; Sahoo & Mishra, 2012; Shuck, Reio & Rocco, 2011;

Swaminathan & Rajasekaran, 2010). It builds passion, commitment, alignment to strategy, increased trust, a sense of loyalty in competitive environment, high energy and brand ambassadors (Sahoo & Mishra, 2012). Robertson and Cooper (2009) state that high levels of employee engagement and psychological well-being play a central role in delivering important outcomes that are associated with successful, high performing organisations and Pech (2009) advances that organisational transactional costs are reduced when employees trust their managers.

Several authors have highlighted the influence that supervisors have on employee engagement levels (Gaan & Bhoon, 2012; Markos & Sridevi, 2010; Papalexandris & Galanaki, 2008; Sahoo & Mishra, 2012; Saks, 2006) . Papalexandris and Galanaki (2008) advanced that the best predictor of a subordinates level of engagement is good management mentoring. Pech (2009) noted that trust is critical to achieving employee engagement. To build trust organisations need managers that demonstrate concern for staff, exhibit passion, deploy deliberate strategies to build trust. Lockwood (2007) suggests that only 56% of employees feel that their managers have a good knowledge of what they do and promotes the use of their talents.

A strong manager-employee relationship is needed for employee engagement. A top driver of employee engagement is the senior managers' interest in the employees' wellbeing. A company with committed leadership can achieve employee engagement (Markos & Sridevi, 2010).

Bakker, Albrecht and Leiter (2011) suggest that genuine engagement requires that employers and employees together craft a positive, trusting, respectful and mutually beneficial working relationship where both believe that there is equity, fairness, opportunity and meaningful growth. Employees are more likely to be engaged if they perceive that their organisation and managers accommodates their psychological needs which require management understanding of the psychological contract. Sahoo and Mishra (2012) noted that employees expected better working conditions, equitable pay and opportunities for career advancement and that denial of these by the organisation can lead to PCB which leads to feelings of cynicism and a lack of trust in the organisation.

### **2.3 Psychological Contract**

The psychological contract is the employees beliefs that reflects their expectations of what they will provide the employer in return for what the employer will provide them

(Agarwal & Bhargava, 2013; Bal, Chiaburu, & Jansen, 2010; Haggard, 2012; Pavlou & Gefen, 2005; Starnes, 2005; Turnley & Feldman, 2000). These beliefs are shaped by pre-employment factors, on the job experiences and broader societal issues (Dabos & Rousseau, 2004). These expectations are usually tacit or unvoiced that depends to a great extent on the individual and situational factors that exist and which vary from employee to employee (Agarwal & Bhargava, 2013; Turnley & Feldman, 2000) creating a sense of mutual obligations between the employee and the organisation (Haggard, 2012).

Pavlou & Gefen (2005) propose that the perpetual, unwritten and implicit nature of psychological contracts differentiates them from legal contracts. The antecedents of the psychological contract emerged from work in social exchange theory, central to which is the premise that social relationships involve unspecified obligations and unequal power resources (Blau 1964 in Cullinane & Dundon, 2006). Psychological contracts include implicit and explicit promises made by either party voluntarily and with mutual agreement (Agarwal & Bhargava, 2013).

Rousseau (2004) identified the 3 types of psychological contract as transactional, relational or hybrid. The relational dimension requires that the organisation provide training, professional development and fair treatment while the transactional involves adequate compensation, acceptable working conditions and guarantees of short term employment (Zagenczyk, Glibney, Few & Scott, 2011). In most cases it is likely that a hybrid form of psychological contract exists that has both relational and transactional attributes (Dabos & Rousseau, 2004).

Cullinane & Dundon (2006) noted that there is an increasing tendency to rely on good faith agreements which better accommodate the individualistic values among the workforce. Contemporary views stress the two way nature of the psychological contract based on the perceptions of promises and obligations by both the employer and employee (Dabos & Rousseau, 2004; Haggard, 2012). They postulate that the antecedents of employee engagement are largely a subjective perception from the employees' perspective and arise from both the relational and transactional dimensions of the psychological contract. Cullinane & Dundon (2006) further note that the contract is constantly evolving to accommodate the changing context of the employee-organisation relationship. Research has shown that employees have different individual understandings of their psychological contracts and respond differently to PCB (Bal et al., 2010; Cullinane & Dundon, 2006).

A psychological contracts evaluation involves the assessment of the extent to which the employee feels that the employer has met their obligations in terms of the contract (Haggard, 2012). PCB is a common occurrence that is related to undesirable organisational outcomes (Turnley & Feldman, 2000). It occurs when the employee perceives that the employer has failed to deliver on their implied obligations. Fulfilment of the contract is negatively related to an employees' intention to quit (Dabos & Rousseau, 2004; De Vos & Meganck, 2009)

## **2.4 Psychological contract breach (PCB)**

### **2.4.1 Definition**

Psychological contract breach occurs when there is a perceived violation of the psychological contract by either the employee or the organisation (Bal et al., 2010; Pavlou & Gefen, 2005). For the purpose of this study PCB will be assessed from the employees perspective.

PCB arises out of either renegeing or incongruence (Pavlou & Gefen, 2005). Cullinane and Dundon (2006) suggested that the psychological contract is mostly a result unvoiced expectations and is subjective with very little to prevent it being casually changed. As a result PCB potentially occurs as a result of incongruence arising from differing expectations (Pavlou & Gefen, 2005; Inkson & King 2010) rather than an intent to knowingly renege by either one party.

Another contributing factor to PCB is the imbalance in power between the employee and organisation. (Cullinane & Dundon 2006). The organisation sometimes has a stronger negotiating position and employees may not feel free to voice their expectations thus creating an environment that's conducive for PCB to occur. Highly skilled employees who are difficult to replace on the other hand can have significant power to negotiate their intrinsic and extrinsic interests (Inkson & King, 2010). Both of these circumstances point to the importance of mutuality in expectations in reducing the propensity for PCB (Dabos & Rousseau, 2004; De Vos & Meganck, 2009).

Zagenczyk, Gibney, Kiewitz & Restubog (2009) found that while PCB is difficult to avoid that supportive supervisory relationships reduce the negative effects of PCB on their perceptions that the organisation values their contributions and cares about their well-being. A possible opposing view is that strong supervisor support may actually aggravate the effects of PCB as the employee may have had higher expectations of their supervisor (Restubog, Bordia, Tang & Krebs, 2010).

### **2.4.2 Implications**

When the organisation is not perceived by the employee to be meeting its promises and obligations the employee reciprocates by changing their contributions and it is thus expected that PCB has a negative relationship with organisation outcomes (Bal et al., 2010; De Vos & Meganck, 2009; Haggard, 2012; Pavlou & Gefen, 2005; Starnes, 2005; Sturges, Conway, Guest & Liefoghe, 2005; Turnley & Feldman, 2000). When the organisation focuses on the employees' subjective interpretation of the organisations obligations and meets them the employee may be motivated to engage in discretionary effort (Bal et al., 2010).

Research has shown that when employees perceive that their psychological contracts have been breached they are less inclined to remain with the organisation (Dabos & Rousseau, 2004; De Vos & Meganck, 2009; Pavlou & Gefen, 2005; Starnes, 2007; Sturges et al., 2005; Turnley & Feldman, 2000). Turnley & Feldman (2000) noted that PCB erodes the basis of the relationship between the employee and the organisation resulting in feelings of mistrust and resentment. It is thus important for organisations to understand what their employees value and design their retention practices to be in line with these (De Vos & Meganck, 2009).

## **2.5 Perceived supervisor support**

Sahoo and Mishra (2012) argued that increasing employee engagement is highly dependent on an organisations leadership and that first line supervisors are believed to be important to building employee engagement. Social exchange theory suggests that perceived support and trust by the employee of the supervisor will lead to positive outcomes (DeConinck, 2010). Research suggests that supervisors are often viewed as mentors which can worsen PCB when a violation occurs (Haggard, 2012).

### **2.5.1 Definition**

PSS is the employees' perception of the extent to which their supervisors care for their well-being, value their contribution and are generally supportive (DeConinck, 2010; Hsieh, 2012; Newman et al., 2011; Pati & Kumar, 2010; Pepe, 2010). This construct has been confirmed in research to have a significant relationship with employee engagement (Sahoo & Mishra, 2012; Pati & Kumar, 2010). Employees who received supervisor support may be more productive (Hsieh, 2012) and in addition increased PSS should, based on previous research, result in reduced turnover (Eisenberger Stinglhamber, Vandenberghe, Sucharski & Rhoades, 2002; Lai & Kapstad, 2009; Newman et al., 2012; Pepe, 2010).

Eisenberger et al. (2002) noted that employees view their supervisors as agents of the organisation and thus perceive their supervisors favourable or unfavourable orientation toward them as an indication of the organisations support. Literature has often considered PSS as being mediated by perceived organisational support (Eisenberger et al., 2002) or as the moderator of the relationships of other factors with ITQ (Dysvik & Kuvaas, 2012).

### **2.5.2 Implications**

There are two main views in literature concerning the relationship that PSS has with the intention to quit. The first is that PSS is an indirect predictor of the intention to quit through perceived organisational support (DeConinck & Johnson, 2009; Eisenberger et al., 2002). The second is that PSS has a direct relationship with the intent to quit (Maertz, Griffeth, Campbell & Allen 2007, Newman et al., 2012). This view is supported by Pepe (2010) who suggests that high levels of supervisor support reduced the level of voluntary employee turnover. While Mahdi, Zin, Nor, Sakat & Naim (2012) noted that lack of supervisor support was best predictor of ITQ other research found that peer, family support, not PSS is best predictor of ITQ.

## **2.6 Intention to quit**

### **2.6.1 Definition**

The employees' intent to quit is adopted as the organisational productivity outcome independent variable for this study. This construct is also referred to in literature as turnover intention (Baek-Kyoo, 2010, Choi, Cheong, & Feinberg, 2012; Mahdi et al. 2012 & Elçi et al., 2012) and the intention to leave (Hellman, 1997; Turner & Chelladurai, 2005 & Paille & Grimmer, 2011). ITQ is defined as a conscious and deliberate willingness to leave the organisation (Baek-Kyoo, 2010; Al Arkoubi, Bishop, & Scott, 2013; Elçi et al., 2012; Mahdi et al., 2012).

### **2.6.2 Relevance**

Researchers have recognised that an employees' intention to leave an organisation is a strong predictor of actual turnover (Shuck, Reio Jr & Rocco, 2011; Baek-Kyoo, 2010; Lai & Kapstad, 2009; Lichtenstein, Alexander, McCarthy & Wells, 2004; Mahdi et al., 2012; Mobley, Horner & Hollingsworth, 1978; Turner & Chelladurai, 2005; Hellman, 1997) and it is an indicator of the extent to which an organisation is vulnerable to losing critical skills (Lai & Kapstad, 2009). Employees usually make a conscious decision to leave before actually doing so (Mahdi et al., 2012).

Reduced levels of job satisfaction which is related to employee engagement can lead to thoughts of leaving the organisation (Al Arkoubi, Bishop & Scott, 2013; Mahdi et al., 2012). Employees with high ITQ are just waiting for an opportunity to leave the organisation but various factors may affect the intention to leave and as a result actual turnover (Baek-Kyoo, 2010; Mahdi, Zi, Nor, Sakat, & Naim, 2012); Paille & Grimmer, 2011). One of these factors could include an unfavourable economy which reduces opportunities to move to another organisation (Mahdi et al., 2012; Turner & Chelladurai, 2005). Another is the employees perceived cost of leaving based on the time and effort required to become part of a new organisation (Turner & Chelladurai, 2005; Wöcke & Heymann, 2012). This sequence of events then results in the employee intending to search for other jobs and after assessing the opportunities the employee could quit (Wöcke & Heymann, 2012). Baek-Kyoo, (2010) found that approximately 40% of the variation in ITQ is explained by organisational commitment. Talented employees who are critical to the organisations are sometimes difficult to retain as they may consider organisational loyalty as a low priority and are susceptible to increased rates of voluntary turnover (De Vos & Meganck, 2013).

### **2.6.3 ITQ impact and issues**

The turnover of desirable employees is harmful to organisations and results in disruption to the organisation, declines in the morale of the remaining employees, the loss of critical skills that are scarce, opportunity, replacement and training costs (Choi, Cheong, & Feinberg, 2012; De Vos & Meganck, 2009; DeConinck & Johnson, 2009; Elçi et al., 2012; Hellman, 1997Lai & Kapstad, 2009; Newman et al., 2012; Pepe, 2010; Wöcke & Heymann, 2012). While the direct costs of turnover can be of concern organisations face significant indirect costs in the form of compromised customer and network relationships where the employee has developed these and disrupted organisational processes (DeConinck & Johnson, 2009; Wöcke & Heymann, 2012).

Al Arkoubi et al. (2013) noted in their research on turnover intentions of US truck drivers that research to date on the intent to quit were more focussed on the management perspective rather than the employees' perspective. Researchers suggest that the prevailing attitude by managers is that to achieved higher retention through higher pay and more time at home and that the findings in the literature on the intent to quit is mixed (Al Arkoubi et al., 2013; De Vos & Meganck, 2009).

While there is little consistency in the findings of the many studies to determine what leads to an employees' ITQ (Al Arkoubi et al., 2013; Mahdi et al., 2013) research

confirms that it is in the best interests of organisations to improve employee retention. Empirical research in mainly developed economies and based on social exchange theory has confirmed the relationship of PSS, EE and PCB to the organisation outcome of turnover intentions (De Vos & Meganck, 2009; Newman et al., 2012; Turnley & Feldman, 2000).

## **2.7 Demographic Variables**

Research has found that demographic variables act as extended factors in the voluntary turnover process and most important of these are age, gender and education (Jones & Harter, 2005; Wöcke & Heymann, 2012). Age was also suggested by Lichteststein et al. (2004) to have a negative relationship with the intention to quit. They suggested that older workers may feel that they are not attractive to other organisations and as a result of their maturity and experience may tolerate some negative aspects of a job that their younger colleagues may not.

Empirical research has found that gender could moderate the relationship between the psychological contract and the intention to quit (Blomme et al. 2010). The perceptions of female employees and the 'glass ceiling' in the promotion path could result in gender based differences in the intentions to quit (Wöcke & Heymann, 2012). Wöcke and Heymann (2012) further found education levels had a relationship with mobility and that the employees with a higher skill level had lower mobility than those with lower skill levels. These variables could then have an influence on an employees' intention to quit.

## **2.8 Summary of literature**

The dimensions of the supervisor, job and organisation are pulled together in this study of the constructs of PSS, PCB and EE relationships with ITQ. For the purpose of this study the following are noted:

- EE is associated with job or role involvement and the extent to which the job situation is central to the person and his or her identity (Sahoo & Mishra, 2012; Khan, 1990)
- PSS is about the employees perception of the extent to which their supervisors care for them and values their contributions to the organisations (Eisenberger et al., 2002).
- PCB is about the perceptions of unmet obligations by the organisation (Bal et al., 2010; Turnley & Feldman, 2000).

There is a lack of clarity on definition and measurement of employee engagement (Robertson & Cooper, 2009). Most definitions in the literature overlapped but nature of the variances in definition expose the construct of employee engagement as a complex one that needs further research in order to improve HRM initiatives (Markos & Sridevi, 2010).

Khan (1990) presumed that individual differences influence the extent to which people engage or disengage. He also suggests that there may be minimum levels of psychological safety, meaningfulness and availability that must be achieved before they move from disengagement to engagement. They may also be a hierarchy that relate to increasing depths of engagement through the physical, cognitive and emotional dimensions.

Relatively little is known about how management can influence employee engagement and there is little empirical research on the factors that predict employee engagement (Sahoo & Mishra, 2012). Most authors identify managers as possibly single biggest influence on employees experience and as a result on PSS, PCB and employee engagement and ITQ. Research establishes that poor management behaviour and PCB are linked to negative outcomes and must not be neglected.

Literature notes that most surveys are done in well to do economies and that findings may vary in Third World countries (Shuck et al., 2011). There is a need for more studies in more countries with varying demographics, education levels and industries (Baek-Kyoo, 2010). Cross cultural research will benefit the HRD community. There is also a need to clearly define employee engagement with most studies focussed on identifying the drivers of the construct (Argawal & Bhargava, 2013; Markos & Sridevi, 2010).

Bakker et al. (2011) suggested that future research on engagement should look for moderators on the established antecedents of employee engagement. These could be the PCB and individual factors such as race, age, seniority, qualifications and gender. Little research has been done to examine the impact of PCB on work engagement while recent work has not addressed the various situational and individual variables which influence our reactions to breach (Agarwal & Bhargava (2013).

Zagenczyk et al. (2009) suggest that research should explore the buffering effects of relationships on the relationship between PCB and outcomes. Pati and Kumar (2010) noted that there is a lack of explanation of the factors that selectively leads employees

of the same organisation to engagement or disengagement. Al Arkoubi et al. (2013); Baek-Kyoo (2010) and Mahdi et al. (2012) suggested that the determinants of the intention to quit are complex and suggest that further study on others factors that may impact on this construct.

There is little literature on EE as a moderator of the relationships between ITQ and its predictors with the majority of academic attention being focussed on its role as a predictor of ITQ. Literature on EE, PSS and PCB supports the view that improved performance in these constructs is critical to the success of an organisation. However the concurrent state of PCB, EE and PSS may have a significant relation with the productivity measure of the intention to quit and may require that organisations monitor and respond to PCB, EE and PSS with increased vigour.

### 3. Research questions and hypothesis

This chapter outlines the questions and hypothesis that this study is intended to answer and test.

The objective of the study is to determine the moderating effect of EE on the relationships of PCB and PSS with ITQ and in the process assess the extent to which EE, PCB and PSS are related to organisation outcome of ITQ and as a result add to the depth of knowledge of these variables. As there is limited literature on the moderating effects of EE on the predictors of ITQ that part of this study has approached the research objective by framing research questions one, two and three.

The following research questions and hypothesis were derived:

#### **Research hypothesis one:**

Literature confirms that studies on these constructs suggest that these variables are significantly correlated to ITQ. As such it is hypothesised as follows:

H<sub>1</sub>: The level of employees EE, PCB and PSS is associated with their level of ITQ

The hypothesis test is thus written as:

H<sub>0</sub>:  $r(\text{PSS}) = r(\text{EE}) = r(\text{PCB}) = 0$

H<sub>1</sub>:  $r(\text{PSS}) \neq r(\text{EE}) \neq r(\text{PCB}) \neq 0$

The test statistic for this hypothesis is  $r$  which is the Pearsons product moment correlation coefficient of the relationship between variables.

#### **Research question one:**

What is the joint relationship of EE and PSS with the employees' intention to quit?

#### **Research question two:**

What is the joint relationship of EE and PCB with the employees' intention to quit?

#### **Research question three:**

What is the moderating effect of EE on the relationship of PCB and PSS with employees' intention to quit?

## **4. Proposed research methodology and design**

### **4.1 Research setting**

The study draws on a sample from Airports Company South Africa (ACSA). ACSA is South African state owned company whose shareholders include Department of Transport, the Public Investment Corporation and various trusts representing employees and Black Economic Empowerment shareholders. ACSA employs, approximately 2000 employees nationally and owns and manages all of South Africa's 9 main airports including O.R. Tambo International, Cape Town International and King Shaka International. Sixty per cent of revenues are derived from aeronautical charges that include landing fees and passenger service charges. These charges are set by a government appointed regulator to mitigate against possible abuse of the organisations monopolistic position. The balance of revenue is derived from non-aeronautical activities that include retail, property and parking. The organisation is also a shareholder in the concessions that own and manage Mumbai International in India and Guarulhos International in Brazil and has the primary role of airport operator in these ventures

The organisation is facing increased scrutiny of its investment and operational performance from the aviation industry. This has resulted in an increased focus on asset optimisation and operational efficiencies.

### **4.2 Research method**

The study employs a quantitative explanatory research design and reveals the relationship between PCB, PSS and employee engagement on the intent to turnover. An explanatory study is used to explain the relationship between variables (Saunders & Lewis, 2012). A quantitative design addresses the research objective through empirical assessments using measurement and analysis (Zikmund, Babin, Carr & Griffin, 2013). Quantitative values were attached to the variables, in this case gender, seniority level in the organisation, educational level, employee engagement, PSS, PCB and the productivity outcome of intent to turnover, so that they could be subjected to correlation statistical tests to gain insights into the inter variable relationships.

A survey research strategy was employed which involved the structured collection of data from a sizeable population. Zikmund et al. (2013) noted that surveys are an inexpensive, quick, accurate and efficient means off assessing information about a population. Data collection was in the form of questionnaires with structured questions

that imposed a limit on the number of allowable responses (Zikmund et al., 2013). A limitation of this approach is that with a single or even a few companies it may result in a findings bias (Saunders & Lewis, 2012). Respondents with emails were emailed links to an online survey platform and those without email were approached physically during their shift changes. The study is cross sectional which Saunders and Lewis (2012) defined as one that collects data from participants at only one period in time on a particular topic.

### **4.3 Scope and reasoning**

The scope of the study is to determine the moderating effect of EE on the relationship between PSS and PCB with the intention to turnover in the South African operations of ACSA.

### **4.4 Population and sample**

The population for the purpose of this study is defined as all employees at all levels of seniority or job levels in all organisations. The sample comprised 1081 employees of ACSA at OR Tambo International Airport. This sample was accessible to the researcher and is of sufficient size for the purpose of this study. Approximately 561 of the employees are semi-skilled security officers, 362 are fire-fighters, engineers and technicians and 53 are at management level. Approximately 47% of the sample are black males and 39% are black females. Approximately 1.5% are categorised as people with disabilities. The sample included executive management, middle management, department heads, supervisors and general hands. These are categorised in job levels as unskilled (SOL1), semi-skilled (SOL 2), skilled technical (SOL 3 and 4), professionally qualified (SOL 5), Senior Management (SOL 6) and top management (SOL 7 and 8). The questionnaire employed ACSA's SOL categorisation for job levels as it is a term that is familiar with the sample and facilitated understanding of section of the questionnaire dealing with this.

### **4.5 Unit of analysis**

The unit of analysis is individual employees who expressed their perceptions of PSS, PCB, EE and ITQ as guided by the structured questionnaires.

### **4.6 Sampling and technique**

Researchers recommend obtaining data from a diverse sample to obtain variability in the responses (Agarwal & Bhargava, 2013). The study employed a non-probability,

purposive sampling technique. The non-probability sampling technique is as result of not having a complete list of the population and as a result cannot select the sample at random (Saunders & Lewis, 2012). The probability of each member of the population being selected is unknown. The sampling for this study was limited to the OR Tambo International Airport operation which has approximately 1081 ACSA employees. The purposive sample is heterogeneous and is diverse enough to provide sufficient variation in the data to be collected (Saunders & Lewis, 2012).

The study administered an online and by hand questionnaire to the approximately 1081 employees of ACSA at OR Tambo International Airport. These are two of the five methods suggested by Saunders and Lewis (2012) to collect data via questionnaires.

The respondents remained anonymous with no identifying data, such as names or job title, being captured. Saunders and Lewis, 2012) note that questionnaires are an appropriate method to obtain similar information from a large sample. All the respondents were asked the same questions in the same order (Saunders & Lewis, 2012).

The email survey contained a hyperlink to the questionnaire. Those members of the sample without valid email addresses had the questionnaires delivered and collected in person. Online respondents were given six weeks to complete the survey and a reminder was sent at the end of each week to mitigate against a non-response bias.

#### **4.7 Instrument and validity**

The questions needed to collect sufficient data to answer the research questions which is what Saunders and Lewis (2012) refer to as content validity. Construct validity is defined as the extent to which the data collection method measures what it was intended to measure and the research findings are about what they state that they are about (Saunders & Lewis, 2012).

To achieve content and construct validity the questionnaires were based on previously published measurement instruments which is one of the methods suggested by Saunders and Lewis (2012). These measures are:

- Psychological Contract Breach (PCB): The Robinson and Morrison (2000) five-item global scale was used to measure PCB (Haggard, 2012; Restubog, Bordia, Tang & Krebs, 2010 & Zagenczyk, Gibney, Few & Scott, 2011). This scale has been noted to have a reliability coefficient (Cronbach's alpha) of 0.84

by Robinson & Morrison (2000), .95 by Haggard (2012) and is equal to or in excess of 0.72 in the Restubog et al. (2010) study. A three item version of this scale used in the Zagencyk et al. (2011) study yielded an alpha in excess of 0.96. Items 1,2 and 3 are positively worded statements that are reverse coded. The responses were on a Likert-type five point scale (1 = strongly disagree; 5 = strongly agree).

- Employee Engagement (EE): The Shortened Utrecht Work Engagement Scale developed by Schaufeli & Bakker (2006) based on the Schaufeli, Salanova, Gonzalez-Roma & Bakker (2002) 17 factor scale was used in this study to assess the level of employee engagement. This shortened nine factor scale used by Agarwal and Bhargava (2013) has reported sub scale Cronbach's alphas of 0.78 for absorption, 0.77 for vigour and 0.85 for dedication with an overall scale alpha of 0.92 (Schaufeli & Bakker, 2006). Pati and Kumar (2010) reported slightly lower alphas with only the alpha for vigour being below the threshold of 0.7 (Tavakol & Dennick (2011). Schaufeli and Bakker (2006) concluded that the scale had acceptable psychometric properties. Respondents confirmed the frequency of their feelings using a seven point frequency rating scale (1 = Never; 7 = Always/Everyday)
- Perceived Supervisor Support (PSS): Eisenberger, Stinglhamber, Vandenberghe, Sucharski and Rhoades (2002) adapted eight items from the Survey of Perceived Organisational Support (SPOS) scale (Eisenberger, Huntington, Hutchinson & Sowa, 1986) and replaced the word organisation with supervisor. Items 4, 8, 9, 13, 20, 22, 23 and 25 were selected based on their high loadings of 0.66 to 0.84 (Eisenberger, et al., 2002). Respondents rated their agreement with each statement using a seven point Likert-type scale (1 = strongly disagree; 7 = strongly agree). Two of the questions are reverse scored.
- Intention to Quit (ITQ): The Lichtenstein, Alexander, McCarthy and Wells (2004) three item scale was used to measure the intent to turnover or quit. It has a reported Cronbach's alpha of 0.90 (Paille & Grima, 2011). Paille and Grima (2011) reported loadings in excess of 0.8 for each of the items. The instrument used a five-point Likert-type scales (1= strongly disagree to 5 = strongly agree) to express the extent of the respondents agreement.
- Control variables. Past research on social exchange theory and organisational identification has controlled for the demographic variables of gender, age, education, managerial responsibility and tenure (Hellman, 1997; Jones &

Harter, 2005; Lai & Kapstad, 2009; Paille & Grima, 2011; Turnley & Feldman, 2000; Zagenczyk, Gibney, Few & Scott, 2011). Wöcke and Heymann (2012) suggest that turnover models included demographic variables to increase their precision. The consistency of the relationship between the variables is suggested to be moderated by employee investments which increase an employees' psychological attachment to the organisation (Hellman, 1997). These investments that were examined by Hellman (1997) in the investigation of the relationship between job satisfaction and the intent to quit included an individuals' age and tenure as is was in research on turnover by Mobley et al. (1978). Eisenberger et al. (2002) controlled for tenure. There is a correlation between age and POS, which is the scale on which PSS scale is based (Rhoades & Eisenberger, 2002). Gender is noted to possibly influence POS (Rhoades & Eisenberger, 2002). Employees with longer tenure tend to have lower levels of PCB (Rhoades & Eisenberger, 2002).

Saunders and Lewis (2012) note that the questionnaire should to be tested to check that the respondents will be able answer the questions correctly and that answers will be recorded correctly. This required a pilot test of the questionnaire with a small number of people who are similar to the sample. The survey employed the questions as used in the literature with the same question order, wording recommendations and scales.

The types of questions, based on the selected surveys that were used, as noted by Saunders and Lewis (2012) for questionnaires were:

- Category type for gender information
- List type for seniority data and tenure
- Rating type for the opinions of the respondents

#### **4.8 Reliability**

Reliability is defined as the extent to which the research method and analysis procedures will produce consistent results (Saunders and Lewis, 2012; Zikmund, et al., 2013). This was assessed by calculating the Conbrach Alpha developed by Lee Conbrach in 1951 to measure the internal consistency of a scale used in questionnaires. (Tavakol & Dennick, 2011). The alpha is expressed as a number between 0 and 1 with the acceptable level being above 0.70 (Tavakol & Dennick, 2011; Zikmund, et al., 2013).

#### 4.9 Data analysis

The quantitative categorical data that was collected from the sample is ranked data with a section of descriptive data that captured demographic information. Ranked data are categorical data that is placed in definite order (Saunders & Lewis, 2012). The responses to the subscale items were computed to create measures for each variable (Zagenczyk, et al., 2011).

The Cronbach's Alpha values were extracted from the reliability test on the variables to verify that they are in the acceptable range of above 0.70 (Tavakol & Dennick, 2011; Zikmund, et al., 2013). The data was subjected to a correlation matrix analyses using the Pearson Correlation Matrix which was used to report on the observed linear correlations between the variables (Saunders & Lewis, 2012). The observed correlation coefficient or  $r$  value is the statistical measure, used to answer the hypothesis, indicating the direction and strength of the association between two variables and will be reported in a correlation matrix which is the standard form for reporting correlation coefficients for more than two variables (Weiers, 2008; Zikmund et al., 2013).

The research required multivariate data analysis to assess the relative strength of the relationship between the independent variables and ITQ as it involves 3 or more variables (Zikmund et al., 2013). Multiple regression analysis allows for a dependant variable, in this case ITQ, to be predicted by two or more independent variables (Weiers, 2008; Zikmund et al., 2013). The regression coefficients or beta ( $\beta$ ) expressed the strength of the relationship between each of the three independent variables (PSS, EE and PCB) and the dependent variable (intent to quit/turnover) taking into account that the other independent variables are also related to the dependant variable (Zikmund et al., 2013). The coefficient of determination or multiple determinations, referred to as  $r^2$ , will indicate the total variance variation in the dependant variable caused by one or more of the independent variables (Weiers, 2008; Zikmund et al., 2013). The confidence level for this study is at 95% which is the level traditionally used by researchers (Zikmund et al., 2013). The effects of multicollinearity were considered by observing if the variance inflation factors (VIF) was above 5.0 which would suggest that there were problems with the relationship between the independent variables (Zikmund et al., 2012).

The assessment of the moderation of PSS and PCB by EE as the third variable (Baron & Kenny, 1986) was done using the two-way analysis of variance (ANOVA) which

examined the effect of two independent variables on the dependent variable and also the effect of the interactions between different levels of the independent variables (Weiers, 2008). Southwood (1978) noted that where the effects of a variable are dependent on the levels of other variables that tests for interaction effects are required. This assessed whether the effect on the ITQ at one level of the independent variable depended on the level of the other present independent variable (Weiers, 2008). The moderating variable in this analysis was EE.

#### **4.10 Research limitations**

The study accessed a limited number of individuals from a single organisation that has a specific geographic context. This may not be representative of the population and may result in a response bias. Convenience sampling has a disadvantage in that projecting the data beyond the sample is relatively risky and that unrepresentative samples are likely (Zikmund et al., 2013). The study is also not longitudinal and will not be able to consider context factors such as the current economic climate, seasonal pressures and contemporary priorities.

## **5. Data Analysis**

### **5.1 Introduction**

This chapter presents the results of the statistical analysis of the data. It includes the descriptive analysis which describes the basic characteristics of the data using frequency distributions, means skewness and kurtosis followed by correlation matrices, multiple regression and two-way ANOVA analysis where the interactive effects of the independent variables on the single dependent interval scaled variable was investigated simultaneously (Zikmund et al., 2013).

The scale items were computed with items under section B of the questionnaire (see annexure A) labelled as PSS, section C labelled as EE, section D labelled as PCB and section E labelled as ITQ. Pearson correlations were done to assess the linear relationships between all the variables. The reliability of the scales was tested using Conbrachs' alpha.

### **5.2 Pilot**

A pilot survey of six individuals was done at separate business unit location which was the companys' corporate office in Bedfordview. Grammatical and scale errors were identified and corrected. These included an error on the Intent to quit section which used a 7 point scale instead of a 5 point scale. These were corrected prior to the main survey being conducted.

### **5.3 Response rate**

A total of 475 responses were received from a sample of 1080 employees. Of these 645 employees had access to email and were surveyed online using SurveyMonkey.com. The balance of 435 employees were only accessible through physical contact and paper based surveys were issued to survey these employees. The overall initial response rate was 43.98% and the final response rate after data cleaning was 41.6%.

#### **5.3.1 Survey - online**

The online survey was issued on 03 July 2013, was followed up with 16 reminders and was closed on 12 August 2013. A total of 275 employees responded out of an online sample of 645. Four employees opted out of the survey formally. 34 partially completed surveys were received.

### **5.3.2 Survey - manual**

The manual survey was conducted at the security and trolley departments shift parades and covered the 3 shift complements. This survey was administered on site by the ACSA Research and Quality Management division. 200 employees responded from a manual sample of 435 employees.

### **5.3.3 Data cleaning**

To facilitate data analysis the data was captured onto MS Excel and all questions were coded as per the sections with section B, Q1 being coded as B1; Q2 as B2 and finally section D, Q3 as D3. Males were coded as dummy variable 1 and females as dummy variable 2. The educational level variable had the responses recoded into dummy variables with non=1, matric=2, Diploma=3, three year degree=4 Masters' degree=5 and Doctorate=6. The seniority level (SOL) variable had the responses recoded as SOL1=1 through to SOL7=7. A total of twenty six responses were deleted where more than two independent and dependant sections were not completed resulting in 449 valid responses.

### **Dependant and independent variables data**

Zikmund et al. (2012) suggests that changes should be made when an obvious error in the response. In cases of item nonresponse plug value was used where the questionnaire was largely complete (Zikmund et al., 2012). In these cases missing answers were inserted in the dependant and independent variable responses using the mid-point answer where 4 was used for a 7 point scale and 3 for a 5 point scale as these were considered neutral values as per the method noted by Zikmund et al. (2012). In instances where entire scales had a nonresponse the items were left blank as the risk of creating error by plugging a value is too high (Zikmund et al., 2012). The variables were then computed and the data analysed.

### **Demographic data**

Missing answers for SOL level were addressed by using 2 as the plug value. Age and tenure non responses were left blank and none was the plug value for qualification and education level missing answers as per the approach noted by Zikmund et al., (2012). The data was then imported into IBM SPSS Statistics and the reverse scored items were recoded.

## 5.4 Demographics

The descriptive data analysis is based on the 449 remaining valid responses. The skewness of the demographic data was within acceptable norms as was the kurtosis.

**Table 1: Demographic Statistic test**

	Gender	Age (years)	Tenure (years)	Education Level	Seniority level
<b>Valid</b>	446	446	445	447	446
<b>Missing</b>	3	3	4	2	3
<b>Mean</b>	-	36	7	Diploma	Skilled
<b>Median</b>	-	35	5.00	Diploma	Skilled
<b>Mode</b>	-	37	1.0	Matric	Semi-skilled
<b>Std. Dev.</b>	-	8.5	5.79	.87	1.13
<b>Skewness</b>	-	.46	.92	.73	.735
<b>Kurtosis</b>	-	-.16	-.18	.15	.58

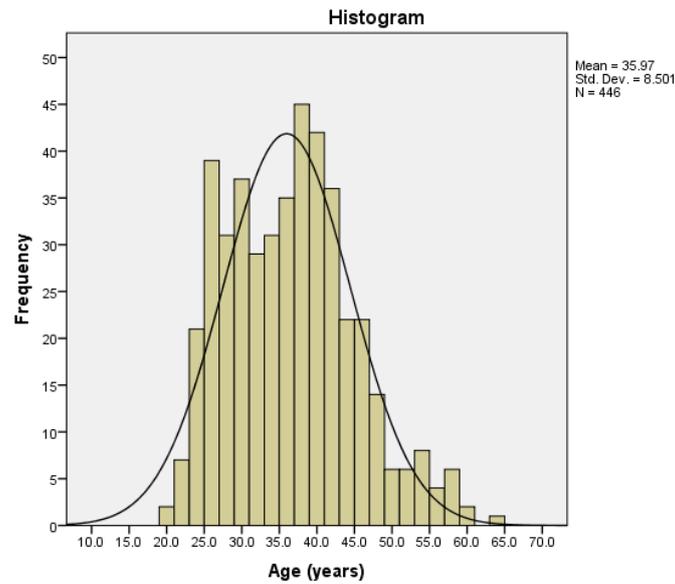
The gender profile (table 2) of the respondents comprised 241 males (53.7%) and 205 females (45.7%). Three respondents did not answer this question.

**Table 2 : Gender of respondents**

		Frequency	Percent	Cumulative Percent
Valid	No response	3	.7	.7
	Male	241	53.7	54.3
	Female	205	45.7	100.0
	Total	449	100.0	

The mean age of the respondents was 35.97 years. Two respondents did not supply the age. Fifty per cent of the respondents were between 29 years and 41 years of age. Histograms are used to graphically illustrate the data. The histogram in figure 2 shows the frequency distribution of the age of the respondents.

**Figure 2: Age of respondents**



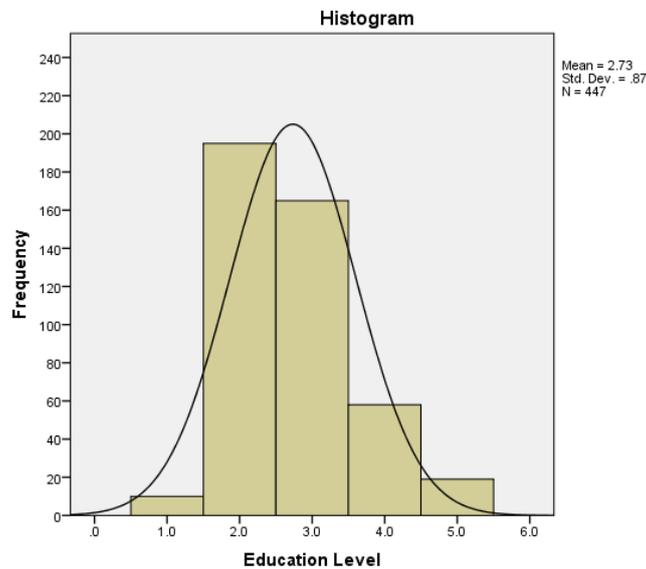
The mean tenure of the respondents is 7 years and 5% have served the organisation for between two and eleven years with 25.4%, as seen in the frequency table (see table 3), having in excess of ten years of service.

**Table 3: Tenure of respondents**

	Frequency	Percent	Valid Percent	Cumulative Percent
.0	9	2.0	2.0	2.0
1.0	75	16.7	16.9	18.9
2.0	32	7.1	7.2	26.1
3.0	38	8.5	8.5	34.6
4.0	27	6.0	6.1	40.7
5.0	50	11.1	11.2	51.9
6.0	47	10.5	10.6	62.5
7.0	17	3.8	3.8	66.3
8.0	11	2.4	2.5	68.8
9.0	7	1.6	1.6	70.3
10.0	19	4.2	4.3	74.6
11.0	16	3.6	3.6	78.2
12.0	12	2.7	2.7	80.9
13.0	11	2.4	2.5	83.4
14.0	6	1.3	1.3	84.7
15.0	68	15.1	15.1	100
Total	449			

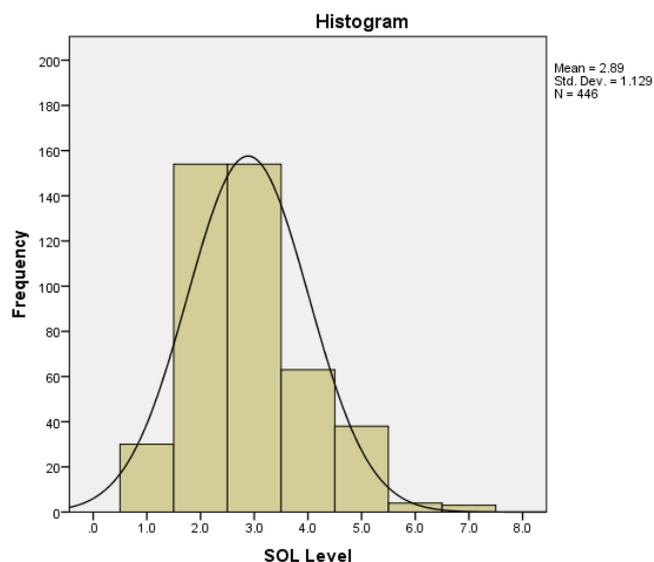
Of the total who responded ten had no formal qualifications and two respondents provided no answer to this question. 43.6% of the respondents had a matric and 36.9% had diploma. A total of 17.3% of the respondents listed having a three year degree or higher qualification.

**Figure 3: Level of education of the respondents**



A total of 83.1% of the respondents were in the semi-skilled (SOL 2) job level and skilled technical (SOL 3 and 4) job levels (see figure 4) and three respondents did not provide responses to this question.

**Figure 4: Job level (SOL) of the respondents**



## 5.5 Scales

The next section reviews the descriptive statistics of the entire scales and scale items. The scales had between 5 and 11 missing responses (see table 4). The data demonstrated acceptable measures of kurtosis and skewness. Sections 5.6 through to 5.9 provide detailed descriptive analysis of the individual scales and scale items the summary of which is illustrated in table 4.

**Table 4: Summary of all scales**

	PSS	EE	PCB	ITQ	
N	Valid	444	438	446	447
	Missing	5	11	3	2
Mean	35.80	45.33	14.22	8.40	
Median	37.00	49.00	14.00	9.00	
Mode	20.00	53.00 <sup>a</sup>	17.00	3.00	
Std. Deviation	11.77	14.37	5.11	4.16	
Variance	138.47	206.44	26.05	17.29	
Skewness	-.161	-.988	-.006	.133	
Std. Error of Skewness	.116	.117	.116	.115	
Kurtosis	-.948	.167	-.432	-1.263	
Std. Error of Kurtosis	.231	.233	.231	.230	
Range	48.00	54.00	20.00	12.00	
Minimum	8.00	9.00	5.00	3.00	
Maximum	56.00	63.00	25.00	15.00	
Conbrachs alpha	.869	.940	.783	.919	

a. Multiple modes exist. The smallest value is shown

## 5.6 Perceived Supervisor Support (PSS)

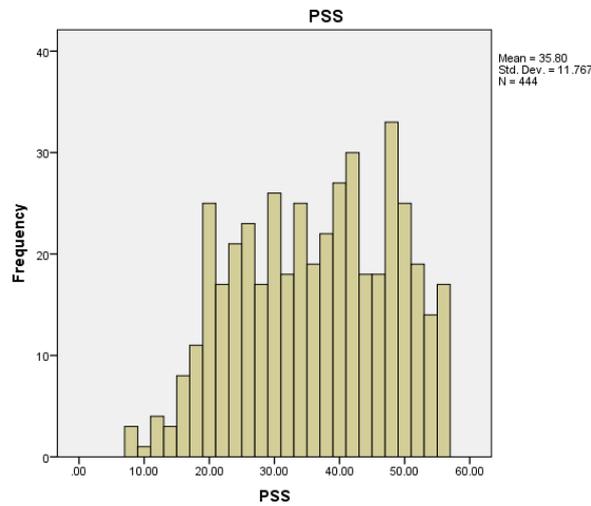
The total PSS scale had 444 completed responses with the scale items demonstrating inter-item correlations and covariance (table 5). The mean of the scale is 35.8 with a range of 48 and variance of 138.75. A total of 50% of the scale results were between 26 and 46.

**Table 5: Summary Item Statistics (PSS)**

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	4.47	4.18	4.82	.64	1.15	.063	8
Item Variances	4.15	3.89	4.48	.59	1.15	.047	8
Inter-Item Covariances	1.88	.069	3.36	3.29	48.46	1.53	8
Inter-Item Correlations	.451	.016	.82	.79	49.46	.087	8

The item means is 4.47 with a range of 0.642 (table 5) and some of the items had no responses (Annexure 1). The histogram in figure 5 indicates the frequency of responses to the overall PSS scale.

**Figure 5: PSS scale frequency of responses**



The scale had an overall reliability of 0.868 (table 6) which is well above the critical threshold of 0.7 (Tavakol & Dennick, 2011; Zikmund, et al., 2013). This is similar to the scale reliability of .93 achieved by DeConinck & Johnson (2009) and .85 achieved by DeConinck (2010).

**Table 6: Scale Alpha (PSS)**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.869	.868	8

The alpha would improve if items B66new and B77new are deleted (annexure 2). As the scale reliability is sufficiently high these items have been retained.

## 5.7 Employee Engagement (EE)

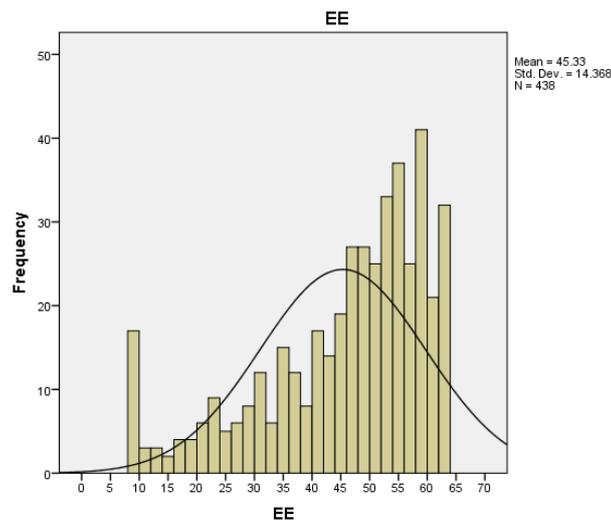
The independent variable of EE had 438 completed responses. The items demonstrate inter-item covariance and correlation (see table 7). The mean of the scale is 45.3 with a range of 54 and variance of 206.44 (Annexure 3).

**Table 7: Summary Item Statistics (EE)**

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	5.037	4.582	5.546	.963	1.210	.092	9
Item Variances	3.769	3.370	4.189	.820	1.243	.075	9
Inter-Item Covariances	2.396	1.541	3.101	1.560	2.013	.143	9
Inter-Item Correlations	.638	.400	.811	.410	2.026	.010	9

The frequency distributions of the overall scale responses are illustrated in figure 6.

**Figure 6: EE scale frequency of responses**



The scale had an overall reliability of 0.940 (table 8) which is well above the critical threshold of 0.7 (Tavakol & Dennick, 2011; Zikmund, et al., 2013).

**Table 8 : Scale Alpha (EE)**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.940	.941	9

The alpha would improve if item C9 is deleted (Annexure 4). As the scale reliability is sufficiently high this item has been retained.

## 5.8 Psychological Contact Breach (PCB)

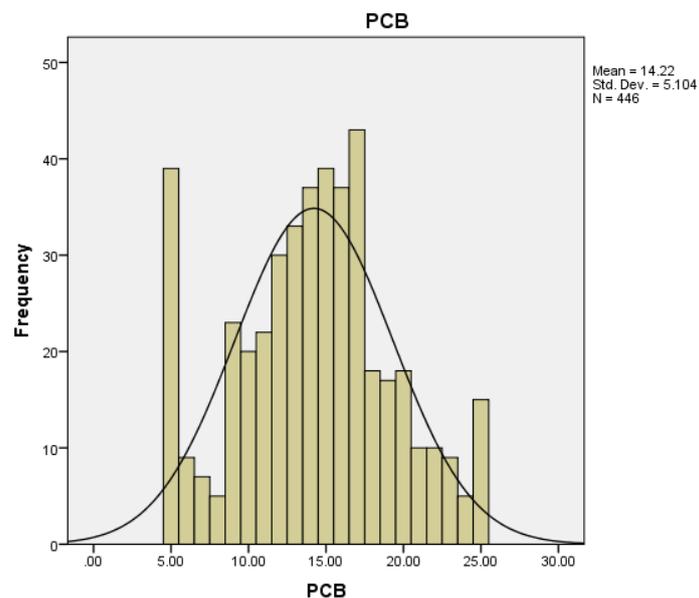
The independent variable of PCB had 447 completed responses. The computed scale variable was labelled PCB. The scale demonstrated inter-item covariance and correlations (table 9) and the mean of the computed scale is 14.21 with a range of 20 (Annexure 5).

**Table 9 : Summary Item Statistics (PCB)**

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	2.84	2.64	3.02	.37	1.14	.032	5
Item Variances	1.95	1.80	2.15	.35	1.19	.02	5
Inter-Item Covariances	.82	.17	1.75	1.58	10.17	.42	5
Inter-Item Correlations	.41	.09	.87	.78	9.51	.10	5

The PCB response frequency is illustrated in figure 7.

**Figure 7: PCB scale frequency of responses**



The scale had an overall reliability of 0.783 (table 10) which is well above the critical threshold of 0.7 (Tavakol & Dennick, 2011; Zikmund, et al., 2013).

**Table 10: Scale Alpha (PCB)**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.783	.779	5

The alpha would improve if items D4 and D5 are deleted (Annexure 6). As the scale reliability is sufficiently high these items have been retained.

### 5.9 Intention to Quit (ITQ)

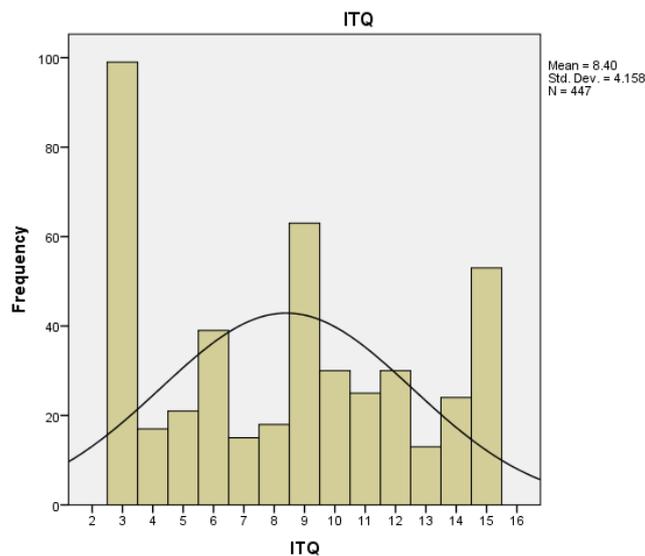
The dependent variable of ITQ had 447 completed responses. The scale demonstrated inter-item covariance and correlations (table 11). The mean of the scale is 8.4 with a range of 12 and variance of 17.28 (Annexure 7).

**Table 11 : Summary Item Statistics – Intention to quit (ITQ)**

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	2.800	2.743	2.843	.101	1.037	.003	3
Item Variances	2.232	2.070	2.380	.310	1.150	.024	3
Inter-Item Covariances	1.765	1.610	1.847	.237	1.147	.014	3
Inter-Item Correlations	.791	.747	.832	.085	1.114	.001	3

The frequency of the ITQ scale responses are illustrated in figure 8.

**Figure 8: ITQ scale frequency of responses**



The scale had an overall reliability of 0.919 (table 12) which is well above the critical threshold of 0.7 (Tavakol & Dennick, 2011; Zikmund, et al., 2013). This is a similar reliability to the reliability of .90 obtained by Paille & Grima (2011) and .83 by Lichtenstein et al. (2004).

**Table 12: Scale Alpha (ITQ)**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.919	.919	3

The alpha of the scale would not improve with the deletion of any of the three scale items (Annexure 8).

### 5.10 Pearson Correlation matrix analysis

The variables of age, gender, tenure, education level, job level, PSS, EE, PCB and ITQ were subjected to a Pearson correlation matrix analysis (table 13 on page 36) to observe the linear correlations, as indicated by the correlation coefficients, at a 95% level of confidence (Saunders and Lewis, 2012). According to Saunders and Lewis (2012) absolute correlation values above 0.6 are strong and those below 0.35 are weak to none. The Pearson's product moment correlation coefficient ( $r$ ) was assessed as follows:

**Age:** The demographic variable of age was strongly positively correlated to the variable of tenure, moderately correlated to SOL, weakly positively correlated to, PSS and EE, and weakly negatively correlated to ITQ at a 95 % confidence level. Age was not significantly correlated to PCB or level of education.

**Gender:** Gender was observed to be weakly correlated to EE, PCB and ITQ with no significant correlation to PSS at a 95% confidence level.

**Tenure:** Tenure was observed to have a weak positive correlation to SOL, PSS and EE at a 95% level of confidence. Tenure was not significantly correlated to PCB and ITQ at the 95% confidence level.

**Education:** The level of education observed to have a weak positive correlation to PSS and EE and a weak negative correlation to PCB. There was not observed significant correlation between education and ITQ.

**Job level (SOL):** SOL levels were observed to have a weak positive correlation to PSS and EE and weak negative correlations to PCB and ITQ. These correlations were significant at a 99% confidence level.

**Table 13: Pearson correlations- all variables**

		Age	Gender	Tenure	Education	Job level	PSS	EE	PCB
Gender	Pearson Correlation	-.216**	1						
	Sig. (2-tailed)	.000							
	N	446	449						
Tenure	Pearson Correlation	.609**	-.155**						
	Sig. (2-tailed)	.000	.001						
	N	445	445						
Education	Pearson Correlation	.037	.012	-.082					
	Sig. (2-tailed)	.432	.803	.086					
	N	446	447	445					
Job level	Pearson Correlation	.369**	-.110*	.287**	.468**				
	Sig. (2-tailed)	.000	.020	.000	.000				
	N	445	446	444	446				
PSS	Pearson Correlation	.127**	-.046	.154**	.152**	.320**			
	Sig. (2-tailed)	.008	.329	.001	.001	.000			
	N	441	444	440	442	441			
EE	Pearson Correlation	.120*	-.127**	.150**	.183**	.314**	.554**		
	Sig. (2-tailed)	.012	.008	.002	.000	.000	.000		
	N	435	438	434	436	435	433		
PCB	Pearson Correlation	-.085	.125**	-.076	-.124**	-.195**	-.483**	-.464**	
	Sig. (2-tailed)	.074	.008	.113	.009	.000	.000	.000	
	N	443	446	442	444	443	441	435	
ITQ	Pearson Correlation	-.135**	.127**	-.087	.003	-.147**	-.418**	-.427**	.467**
	Sig. (2-tailed)	.004	.007	.068	.957	.002	.000	.000	.000
	N	444	447	443	445	444	442	436	444

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

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

### 5.11 Research hypothesis 1

This hypothesis seeks to assess the relationship of EE, PSS and PCB with ITQ within the context of this study. The variables of tenure, gender, age, education and job level (SOL) were controlled for in this partial correlation analysis, as seen in table 14, based on the significant zero order correlations that they exhibited with some of the independent and dependent variables in table 13 and in literature. It must be noted that where the demographic variables demonstrated correlations to PSS, EE, PCB and ITQ that these correlations were weak. A partial correlation analysis, which is a type of Pearsons correlation, between the variables PSS, EE, PCB and ITQ considers the fact that they are all correlated to the other control variables of tenure, gender, age, education and job level (Zikmund et al., 2013). The r value can then be assessed against the critical r value for Pearsons correlations based on the degrees of freedom to determine if the result is significant at the required level. The output from SPSS provides the significance level.

EE demonstrated a significant moderate positive correlation with PSS and a moderate negative correlation with PCB and ITQ at the 95 % confidence level. PSS demonstrated a significant moderate negative correlation with PCB and ITQ at the 95% confidence level. PCB demonstrated a significant moderate positive correlation with ITQ at the 95% confidence level.

**Table 14: Partial Correlation of EE, PSS, EE and ITQ**

Control Variables			PSS	PCB	EE
Gender & Age & Tenure & Education & Job level	PCB	Correlation	-.454		
		Significance (2-tailed)	.000		
		df	416		
	EE	Correlation	.498	-.414	
		Significance (2-tailed)	.000	.000	
		df	416	416	
	ITQ	Correlation	-.397	.449	-.376
		Significance (2-tailed)	.000	.000	.000
		df	416	416	416

The demographic variables were then entered in step one as control variables. PSS, PCB and EE were then subjected to a stepwise regression analysis to determine which variables explained the more of the variation in ITQ. The analysis (table 15) demonstrated that PCB explained most of variance in the level of ITQ of the three independent variables with a  $r^2$  value of 0.192 indicating that 19.2% of the variance in ITQ is explained by PCB after controlling for the demographic variables. The three variables together explained 27.5% of the variance in ITQ as seen in stage 5 of table 22. PSS explained the least of the variance in ITQ with a coefficient of determination or  $r^2$  change of 0.018. The independent variables exhibited multicollinearity, being moderately related to one another (Zikmund et al., 2013), as indicated by the partial and zero order correlation summary in table 16 on the next page.

**Table 15: Stepwise multiple regression model summary RQ1**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.221 <sup>a</sup>	.049	.037	4.07556	.049	4.262	5	417	.001
2	.490 <sup>b</sup>	.240	.229	3.64641	.192	104.930	1	416	.000
3	.534 <sup>c</sup>	.285	.273	3.54115	.045	26.098	1	415	.000
4	.550 <sup>d</sup>	.303	.289	3.50124	.018	10.515	1	414	.001
5	.529 <sup>e</sup>	.280	.275	3.53666	-.023	2.704	5	414	.020

a. Predictors: (Constant), SOL, Gender, Tenure, Education, Age

b. Predictors: (Constant), SOL, Gender, Tenure, Education, Age, PCB

c. Predictors: (Constant), SOL, Gender, Tenure, Education, Age, PCB, PSS

d. Predictors: (Constant), SOL, Gender, Tenure, Education, Age, PCB, PSS, EE

e. Predictors: (Constant), PCB, PSS, EE

**Table 16: Multiple regression coefficients – RQ1 (DV: ITQ)**

Model		Unstandardized		Standardized	t	Sig.	Correlations		
		Coefficients		Coefficients			Zero order	Partial	Part
		B	Std. Error	Beta					
1	(Constant)	8.663	1.319		6.567	.000			
	Gender	1.001	.405	.121	2.470	.014	.152	.120	.118
	Age	-.042	.031	-.086	-1.369	.172	-.138	-.067	-.065
	Tenure	.030	.044	.042	.685	.494	-.078	.034	.033
	Education	.388	.266	.082	1.458	.146	.011	.071	.070
	SOL	-.535	.218	-.147	-2.456	.014	-.142	-.119	-.117
2	(Constant)	3.121	1.298		2.404	.017			
	Gender	.514	.366	.062	1.406	.160	.152	.069	.060
	Age	-.044	.028	-.089	-1.590	.112	-.138	-.078	-.068
	Tenure	.040	.039	.056	1.011	.313	-.078	.050	.043
	Education	.542	.239	.114	2.271	.024	.011	.111	.097
	SOL	-.309	.196	-.085	-1.573	.116	-.142	-.077	-.067
	PCB	.363	.035	.451	10.244	.000	.465	.449	.438
3	(Constant)	6.910	1.463		4.724	.000			
	Gender	.587	.356	.071	1.652	.099	.152	.081	.069
	Age	-.048	.027	-.098	-1.800	.073	-.138	-.088	-.075
	Tenure	.055	.038	.077	1.440	.151	-.078	.071	.060
	Education	.535	.232	.113	2.306	.022	.011	.112	.096
	SOL	-.096	.195	-.026	-.491	.624	-.142	-.024	-.020
	PCB	.274	.039	.340	7.078	.000	.465	.328	.294
	PSS	-.088	.017	-.252	-5.109	.000	-.413	-.243	-.212
4	(Constant)	8.782	1.557		5.639	.000			
	Gender	.447	.354	.054	1.263	.207	.152	.062	.052
	Age	-.051	.026	-.104	-1.921	.055	-.138	-.094	-.079
	Tenure	.060	.038	.084	1.589	.113	-.078	.078	.065
	Education	.569	.229	.120	2.479	.014	.011	.121	.102
	SOL	-.029	.194	-.008	-.149	.882	-.142	-.007	-.006
	PCB	.242	.039	.301	6.154	.000	.465	.289	.253
	PSS	-.065	.019	-.187	-3.534	.000	-.413	-.171	-.145
	EE	-.050	.015	-.169	-3.243	.001	-.401	-.157	-.133
5	(Constant)	9.255	1.145		8.086	.000			
	PCB	.246	.040	.305	6.211	.000	.465	.290	.257
	PSS	-.061	.018	-.175	-3.354	.001	-.413	-.162	-.139
	EE	-.049	.015	-.165	-3.208	.001	-.401	-.155	-.133

## 5.12 Research question 1

This question sought to establish the joint relationship of EE and PSS (PSSxEE), with ITQ. The variable of PSSxEE was computed and a partial correlation analysis was done (table 17) controlling for tenure, gender, age, education and job level (SOL). The moderate negative correlation of PSS to ITQ of  $-.399$  increased to  $-.471$  at a confidence level of 95% when EE is present.

**Table 17: Correlation matrix - PSS, EE, PSS\*EE, ITQ**

Control Variables			PSS	EE	PSSxEE
Gender & Age & Tenure & Education & job level	EE	Correlation	.499		
		Significance (2-tailed)	.000		
		df	419		
	PSSxEE	Correlation	.892	.802	
		Significance (2-tailed)	.000	.000	
		df	419	419	
	ITQ	Correlation	-.399	-.379	-.471
		Significance (2-tailed)	.000	.000	.000
		df	419	419	419

The independent variables were subjected to a stepwise multiple regression after controlling for the demographic variables, as summarised in table 18 to assess the relative relationships of PSS, EE and PSSxEE to ITQ. The model exited variables at the 90% level of confidence. PSS demonstrated in table 19 a partial correlation of  $.057$  ( $p=.185$ ) and EE a partial correlation of  $.009$  ( $p=.32$ ) noting their multicollinearity with PSS\*EE, at a confidence level which is lower than the threshold 90% level of confidence and were excluded in this regression model (table 20). The variance inflation factors were below 5.0 which indicates that there were no problems with multicollinearity between the independent variables in the model as shown in table 28. PSS interacting with EE explains 23.2% of the variation in ITQ.

**Table 18: Stepwise multiple regression model summary- PSS, PSS\*EE and ITQ**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.219 <sup>a</sup>	.048	.036	4.07226	.048	4.213	5	420	.001
2	.509 <sup>b</sup>	.259	.248	3.59679	.211	119.380	1	419	.000
3	.483 <sup>c</sup>	.234	.232	3.63630	-.025	2.873	5	419	.015

a. Predictors: (Constant), Job level, Gender, Tenure, Education, Age

b. Predictors: (Constant), Job level, Gender, Tenure, Education, Age, PSSxEE

c. Predictors: (Constant), PSSxEE

**Table 19: Multiple regression coefficients RQ1**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations		
		B	Std. Error	Beta			Zero-order	Partial	Part
1	(Constant)	8.690	1.317		6.597	.000			
	Gender	.972	.404	.118	2.408	.016	.148	.117	.115
	Age	-.041	.031	-.084	-1.339	.181	-.138	-.065	-.064
	Tenure	.026	.044	.036	.589	.556	-.082	.029	.028
	Education	.383	.265	.081	1.449	.148	.011	.071	.069
	Job level	-.533	.217	-.146	-2.455	.015	-.142	-.119	-.117
2	(Constant)	11.455	1.191		9.622	.000			
	Gender	.655	.358	.079	1.833	.067	.148	.089	.077
	Age	-.055	.027	-.113	-2.038	.042	-.138	-.099	-.086
	Tenure	.063	.039	.088	1.615	.107	-.082	.079	.068
	Education	.461	.234	.097	1.970	.050	.011	.096	.083
	Job level	.090	.200	.025	.449	.654	-.142	.022	.019
3	PSSxEE	-.002	.000	-.499	-10.926	.000	-.483	-.471	-.460
	(Constant)	12.247	.390		31.408	.000			
	PSSxEE	-.002	.000	-.483	-11.365	.000	-.483	-.483	-.483

a. Dependent Variable: ITQ

**Table 20: RQ1 – excluded variables**

Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics
						Tolerance
1	PSS	-.413 <sup>b</sup>	-8.917	.000	-.399	.891
	EE	-.394 <sup>b</sup>	-8.385	.000	-.379	.880
	PSSxEE	-.499 <sup>b</sup>	-10.926	.000	-.471	.848
2	PSS	.103 <sup>c</sup>	1.050	.294	.051	.183
	EE	-.004 <sup>c</sup>	-.051	.960	-.002	.314
3	PSS	.116 <sup>d</sup>	1.173	.241	.057	.185
	EE	-.014 <sup>d</sup>	-.182	.855	-.009	.320
	Gender	.092 <sup>d</sup>	2.156	.032	.104	.986
	Age	-.070 <sup>d</sup>	-1.625	.105	-.079	.979
	Tenure	.001 <sup>d</sup>	.023	.982	.001	.971
	Education	.101 <sup>d</sup>	2.346	.019	.113	.968
	Job level	.044 <sup>d</sup>	.970	.333	.047	.861

a. Dependent Variable: ITQ      b. Predictors in the Model: (Constant), SOL, Gender, Tenure, Education, Age

c. Predictors in the Model: (Constant), SOL, Gender, Tenure, Education, Age, PSSxEE

d. Predictors in the Model: (Constant), PSSxEE

### 5.13 Research question 2

This question sought to establish the joint relationship of EE and PCB (PCBxEE), with ITQ. The variable of PCBxEE was computed and a partial correlation analysis was done (table 21) controlling for tenure, gender, age, education and job level (SOL). The moderate positive correlation of PCB to ITQ reduced from .455 to .108 at a 95% confidence level when it interacts with EE which has a negative correlation to ITQ.

**Table 21: Partial correlation matrix - PCB, EE, PCB\*EE, ITQ**

Control Variables			PCB	EE	PCBxEE
Gender & Age & Tenure & Education & job level	EE	Correlation	-.423		
		Significance (2-tailed)	.000		
		df	421		
	PCBxEE	Correlation	.576	.462	
		Significance (2-tailed)	.000	.000	
		df	421	421	
	ITQ	Correlation	.455	-.385	.108
		Significance (2-tailed)	.000	.000	.026
		df	421	421	421

The variables were subjected to a stepwise multiple regression analysis, as summarised in Table 22, to assess the relative strength of the relationships of the independent variables PCB and PCB\*EE to ITQ. The model exited variables at the 90% level of confidence. PCB as a predictor in this model was found to explain most of the variance in ITQ by demonstrating a coefficient of determination or  $r^2$  of .197 and together with EE explained 26.7% of the variance in ITQ.

In this regression model PCB had a moderate partial correlation of .347 and EE had a partial correlation of -.242, demonstrating that PCB and EE exhibit multicollinearity when one considers their zero order correlations to ITQ (table 23). The variance inflation factors were below 5.0 which indicates that there were no problems with multicollinearity between the independent variables in the model. PCB with EE present (PCBxEE) demonstrated a regression coefficient (beta) or strength of relationship of .22 at  $p = .19$  with ITQ and was excluded in this regression model (table 24).

**Table 22 : Stepwise regression model summary - PCB, PCB\*EE and ITQ**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.215 <sup>a</sup>	.046	.035	4.08183	.046	4.106	5	422	.001
2	.493 <sup>b</sup>	.243	.233	3.64018	.197	109.610	1	421	.000
3	.535 <sup>c</sup>	.286	.274	3.53951	.043	25.289	1	420	.000
4	.517 <sup>d</sup>	.267	.264	3.56588	-.019	2.271	5	420	.047

a. Predictors: (Constant), Job level, Gender, Tenure, Education, Age b. Predictors: (Constant), Job level, Gender, Tenure, Education, Age, PCB

c. Predictors: (Constant), Job level, Gender, Tenure, Education, Age, PCB, EE d. Predictors: (Constant), PCB, EE

**Table 23: Multiple regression coefficients – RQ2**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations		
		B	Std. Error	Beta			Zero-order	Partial	Part
1	(Constant)	8.629	1.317		6.551	.000			
	Gender	.935	.404	.113	2.314	.021	.143	.112	.110
	Age	-.033	.031	-.067	-1.086	.278	-.129	-.053	-.052
	Tenure	.020	.044	.028	.466	.641	-.081	.023	.022
	Education	.398	.266	.084	1.495	.136	.008	.073	.071
	Job level	-.575	.218	-.157	-2.643	.009	-.147	-.128	-.126
2	(Constant)	3.050	1.290		2.365	.019			
	Gender	.456	.363	.055	1.255	.210	.143	.061	.053
	Age	-.038	.027	-.078	-1.410	.159	-.129	-.069	-.060
	Tenure	.033	.039	.046	.846	.398	-.081	.041	.036
	Education	.545	.238	.115	2.294	.022	.008	.111	.097
	Job level	-.327	.195	-.089	-1.674	.095	-.147	-.081	-.071
3	(Constant)	7.201	1.501		4.796	.000			
	Gender	.287	.355	.035	.808	.419	.143	.039	.033
	Age	-.045	.026	-.092	-1.703	.089	-.129	-.083	-.070
	Tenure	.047	.038	.065	1.227	.220	-.081	.060	.051
	Education	.588	.231	.123	2.541	.011	.008	.123	.105
	Job level	-.144	.193	-.039	-.745	.457	-.147	-.036	-.031
	PCB	.288	.038	.358	7.632	.000	.470	.349	.315
	EE	-.072	.014	-.244	-5.029	.000	-.409	-.238	-.207
4	(Constant)	7.479	1.015		7.370	.000			
	PCB	.288	.038	.358	7.616	.000	.470	.347	.316
	EE	-.071	.014	-.242	-5.153	.000	-.409	-.242	-.214

a. Dependent Variable: ITQ

**Table 24: Excluded variables**

Model	Beta In	t	Sig.	Partial Correlation	Collinearity Statistics	
					Tolerance	
1	PCB	.457 <sup>b</sup>	10.469	.000	.455	.943
	EE	-.401 <sup>b</sup>	-8.546	.000	-.385	.878
	PCBxEE	.106 <sup>b</sup>	2.236	.026	.108	.994
2	EE	-.244 <sup>c</sup>	-5.029	.000	-.238	.721
	PCBxEE	-.225 <sup>c</sup>	-4.424	.000	-.211	.664
3	PCBxEE	.184 <sup>d</sup>	1.108	.269	.054	.062
4	PCBxEE	.216 <sup>e</sup>	1.304	.193	.063	.063
	Gender	.054 <sup>e</sup>	1.279	.202	.062	.967
	Age	-.073 <sup>e</sup>	-1.748	.081	-.085	.986
	Tenure	-.018 <sup>e</sup>	-.440	.660	-.021	.980
	Education	.101 <sup>e</sup>	2.400	.017	.116	.966
	Job level	-.001 <sup>e</sup>	-.024	.981	-.001	.899

a. Dependent Variable: ITQ

b. Predictors in the Model: (Constant), Job level, Gender, Tenure, Education, Age

c. Predictors in the Model: (Constant), Job level, Gender, Tenure, Education, Age, PCB

d. Predictors in the Model: (Constant), Job level, Gender, Tenure, Education, Age, PCB, EE

e. Predictors in the Model: (Constant), PCB, EE

### 5.14 Research question 3

This question sought to assess whether EE moderated the relationship of PSS and PCB with ITQ using two-way ANOVA.

#### 5.14.1 Two way ANOVA – PSS and EE

Based on the analysis done the main correlation of PSS moderated by EE (PSSxEE) to ITQ appears to be significant with  $r = .47$  at  $p \leq .001$ .

The two-way ANOVA of PSS and EE was done to assess the interaction effect between these independent variables. The variables PSS and EE were split into two levels using the means as the midpoint to create the two new variables of PSSD and EED with recoding into dummy variables (Weiers, 2008) as follows:

- $PSS \leq 36$ , PSSD=1 (low)
- $PSS > 36$ , PSSD=2 (high)
- $EE \leq 45$ , EED=1 (low)
- $EE > 45$ , EED=2 (high)

The two-way ANOVA analysis requires the sample size to be the same for each variable and as some variables had missing answers the n for this analysis is 431 (table 25).

**Table 25: PSS and EE 2 way ANOVA descriptive statistics**

Dependent Variable: ITQ

PSSD	EED	Mean	Std. Deviation	N
	1.00	10.6563	3.83198	128
1.00	2.00	8.4368	4.04826	87
	Total	9.7581	4.06111	215
	1.00	9.2105	3.81433	38
2.00	2.00	6.4326	3.58724	178
	Total	6.9213	3.77116	216
	1.00	10.3253	3.86471	166
Total	2.00	7.0906	3.85427	265
	Total	8.3364	4.16358	431

Table 26 summarizes the results of the two-way ANOVA. There was no observed statistically significant interaction between employee engagement (EED) and perceived supervisor support (PSSD) with  $F(1,427)=.43$ ,  $p=.514$ . There are significantly different levels of ITQ at the different levels of PSS with  $F(1,427)=16.23$ ,  $p\leq.0001$  and EED with  $F(1,427)=34.17$ , ( $p\leq.0001$ ). These relationships are graphically illustrated as profile plots in figure 9.

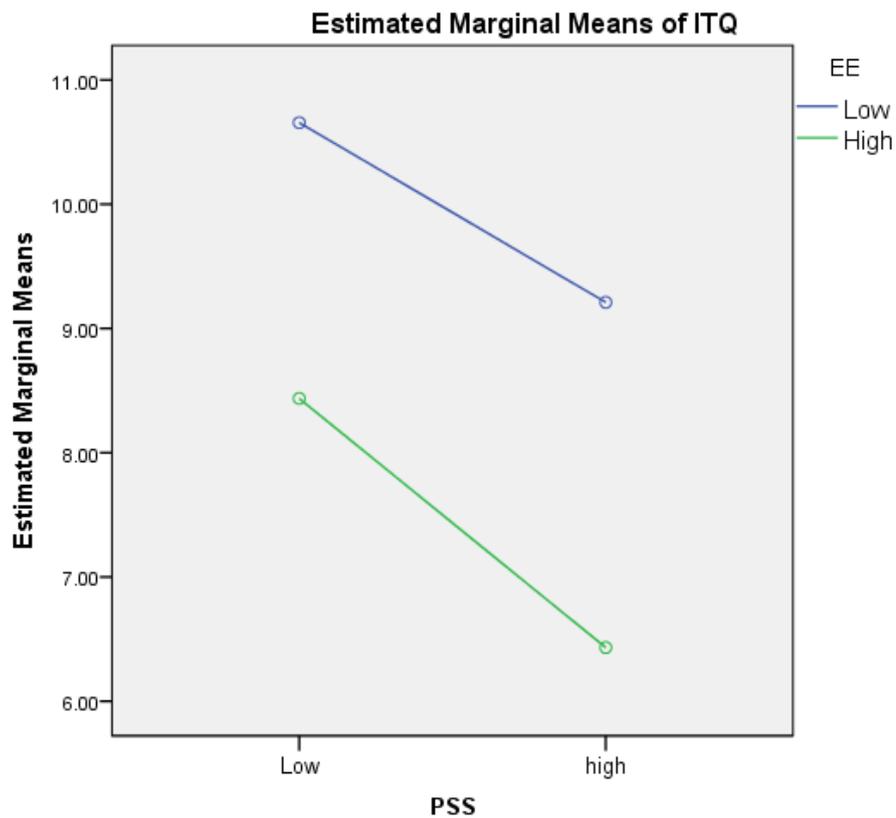
**Table 26: Tests of between subjects effects**

Dependent Variable: ITQ

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	1363.934 <sup>a</sup>	3	454.645	31.876	.000
Intercept	23547.762	1	23547.762	1650.973	.000
PSSD	232.276	1	232.276	16.285	.000
EED	487.390	1	487.390	34.172	.000
PSSD * EED	6.087	1	6.087	.427	.514
Error	6090.284	427	14.263		
Total	37407.000	431			
Corrected Total	7454.218	430			

a. R Squared = .183 (Adjusted R Squared = .177)

Figure 9: Profile plot of PSS and EE to ITQ



#### 5.14.2 Two way ANOVA - PCB and EE

The main correlation of PCBxEE to ITQ appears to be significant with  $r=.108$  at  $p = .026$ . The two-way ANOVA of PSS and EE was done to check the interaction effect between these independent variables. The variable PSS was split into two levels using the means as the midpoint to create a new variable of PSSD with recoding into dummy variables as follows:

- $PCB \leq 14$ , PCBD=1 (low)
- $PCB > 14$ , PCBD=2 (high)

The two-way ANOVA analysis requires the sample size to be the same for each variable and as some variables had missing answers the  $n$  for this analysis is 433 (table 27).

**Table 27: PCB and EE two way ANOVA descriptive statistics**

Dependent Variable: ITQ

EED	PCBD	Mean	Std. Deviation	N
	1.00	9.0541	3.65107	37
1.00	2.00	10.7424	3.85544	132
	Total	10.3728	3.86492	169
	1.00	6.2056	3.62902	180
2.00	2.00	9.0833	3.60792	84
	Total	7.1212	3.85681	264
	1.00	6.6912	3.78001	217
Total	2.00	10.0972	3.83918	216
	Total	8.3903	4.16973	433

As can be seen in table 28 there is no observed statistically significant interaction between EED and PCBD with  $F(1,429)=1.99$ ,  $p=.159$ . There are significantly different levels of ITQ at the different levels of PCBD  $F(1,429)=29.29$ ,  $p\leq.0001$  and EED  $F(1,429)=28.55$ ,  $p\leq.0001$ . These relationships are graphically illustrated as profile plots in figure 10

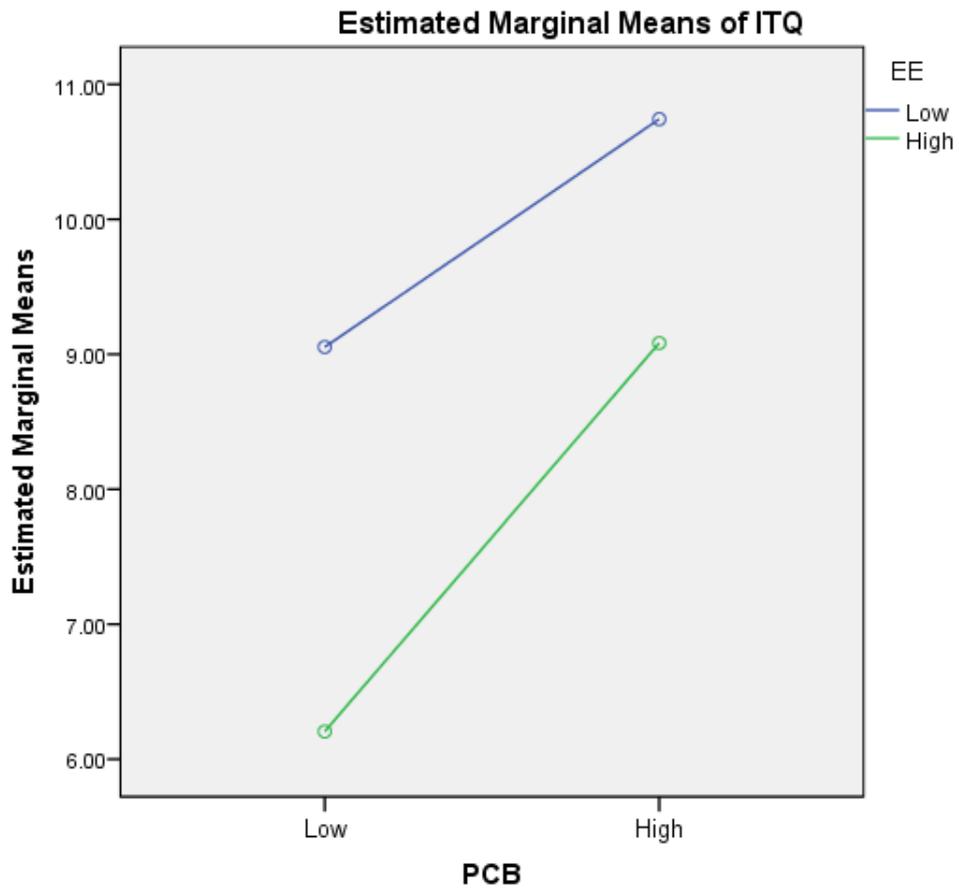
**Table 28: Tests of between subjects effects**

Dependent Variable: ITQ

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	1646.094 <sup>a</sup>	3	548.698	40.135	.000
Intercept	23644.058	1	23644.058	1729.479	.000
EED	390.264	1	390.264	28.546	.000
PCBD	400.470	1	400.470	29.293	.000
EED * PCBD	27.173	1	27.173	1.988	.159
Error	5864.945	429	13.671		
Total	37993.000	433			
Corrected Total	7511.039	432			

a. R Squared = .219 (Adjusted R Squared = .214)

Figure 10: Profile plot of PCB and EE with ITQ



## **6. Discussion of Results**

In this section we discuss the results of the statistical analysis of the relationships between the independent variables of PSS, PCB and EE with the organisation outcome ITQ. The discussion will follow the format of the research questions in chapter three in addition to the observations based on the demographics of the employees.

### **6.1 Demographic effects**

The age, gender and job level of the employees were all significantly but very weakly correlated to the levels EE, PCB, PSS and ITQ of the employees and is consistent in this regard with prior research. Older employees are less prone to want to quit the organisation than their younger counterparts. Similarly, the senior employees are less inclined to want to quit the organisation than their junior counterparts.

The tenure and education level of the employees was also found to play a role in the PSS and EE levels. Employees with longer service also perceive their supervisors as more supportive and are more engaged than those who have been with the organisation for a shorter period. These employees with higher levels of education also displayed more positive perceptions of the level of supervisor support and were more engaged than those with lower levels of formal education. It must be noted that these relationships were very weak even though significant.

These are similar findings to those of Agarwal & Bhargava (2013), Blomme, van Rheede & Tromp (2010) and Wöcke & Heymann (2012) suggesting that employers should be aware of the varying needs of their employees based on the demographic variations of their workforce and where appropriate and different initiatives to reduce their intention to quit the organisation

### **6.2 Research hypothesis 1**

**H1: The level of employees EE, PCB and PSS is associated with their level of ITQ**

A Pearson's' correlation matrix was created to assess the relationships between the variables. The PSS, PCB, EE levels of the employees were all found to have significant relationships ( $p \leq .05$ ) with ITQ even after controlling for the demographic variables which demonstrated weak relationships in this study with ITQ (table 14 on page 38). These results are consistent with the findings of the Turnley & Feldman (2000) study.

### **6.2.1 Perceived supervisor support**

Literature has often considered PSS as being mediated by perceived organisational support, organisational commitment or organisational support (Eisenberger et al., 2002; Hsieh, 2012; Newman et al., 2011) in its relationship with ITQ or as the moderator of the relationships of other predictors of ITQ (Dysvik & Kuvaas, 2012). There is research that does confirm the relationship of PSS with ITQ (Robertson & Cooper, 2009).

The moderate relationship of that PSS has with ITQ  $r = -.397 (p \leq .001)$  in this study suggests that, consistent with literature, the level of support provided by supervisors to their employees is a significant indicator of that employees ITQ. The null hypothesis ( $H_0: r(\text{PSS})=0$ ) is thus rejected as there is sufficient evidence that PSS is correlated to ITQ at the 95% level of confidence. The outcome is consistent with social exchange theory which suggests that perceived supervisor support is related to positive organisational outcomes (DeConinck, 2010; Lai & Kapstad; Pepe, 2010).

### **6.2.2 Psychological contract breach**

Research suggests that employees who perceive that their employers are fulfilling their obligations in terms of the psychological contract are less inclined to want to remain with the organisation (Turnley & Feldman, 2000). They reduce their contributions to the organisation and are not motivated to engage in discretionary behaviour (Bal et al., 2010).

The positive moderate relationship of PCB with ITQ of  $r = .449 (p \leq .001)$  is consistent with the findings of prior studies by Dabos & Rousseau, 2004; Turnley and Feldman (2000) and other researchers. The null hypothesis ( $H_0: r(\text{PCB})=0$ ) is thus rejected as there is sufficient evidence that PCB is correlated to ITQ at the 95% level of confidence

PCB was also observed in the partial correlation analysis to have negative moderate relationships with PSS ( $r = -.418, p \leq .0001$ ) and EE ( $r = -.427, p \leq .0001$ ). Employees with PCB are also more inclined to perceive their supervisors as being unsupportive and are less engaged with their jobs.

The data shows that most employees experienced some level of PCB which is similar to the observation in the Turnley and Feldman (2000) study. This is expected considering the subjective and continuously changing nature of the psychological contract.

### 6.2.3 Employee engagement

Literature confirms the negative relationship that EE has with ITQ (Sahoo & Mishra, 201; Markos & Sridevi, 2010; Shuck et al., 2011). In this study EE was found to have a negative moderate relationship with ITQ with  $r = -.376$  ( $p \leq .001$ ) which is consistent with past research (see table 22 on page 41). The null hypothesis ( $H_0: r(EE)=0$ ) is thus rejected as there is sufficient evidence that EE is correlated to ITQ at the 95% level of confidence. Those employees who were more engaged with their jobs also had lower intentions to quit.

There is also significant relationship between EE and PSS ( $r = -.498$ ,  $p \leq .001$ ) and PCB ( $r = -.414$ ,  $p \leq .001$ ).

The stepwise multiple regression analysis which controlled for demographic variables as represented by table 22 revealed that EE explained an additional variance in ITQ of 1.8% (change in  $r^2 = .018$ ,  $p = .001$ ) which was less than the variances explained by PCB ( $r^2 = .192$ ,  $p \leq .0001$ ) and PSS ( $r^2 = .045$ ,  $p \leq .0001$ ). This variance in ITQ explained by EE is similar to the results observed by Shuck et al. (2011).

### 6.2.4 Predictors of ITQ

This stepwise multiple regression analysis in table 15 on page 39 provides evidence that EE, PSS and PCB all explain unique variance in ITQ. Employees who feel that their work is meaningful and challenging; feel that their supervisor cares about their wellbeing and think that their organisation has fulfilled its promises were less prone to have intentions to leave the organisation. An interesting outcome is that PCB is, in the regression model, found to be the stronger predictor of ITQ than PSS and EE. Similar to the findings of Turnley & Feldman (2000) in this study these relationships were still significant even after controlling for demographics, tenure, SOL and education.

These relationship observations are consistent with finding by DeConinck and Johnson (2009); Dysvik and Kuvaas; (2012); Eisenberger et al., Maertz et al., (2007) and Newman et al., (2012). A gap in literature that identified by most researchers was the need for more studies in emerging markets and different geographic locations which are what this study contributes to.

### **6.3 Research question 1**

#### **What is the joint relationship of EE and PSS with the employees' intention to quit?**

A partial correlation matrix (see table 17 on page 41) displays the linear correlation coefficients of these variables after controlling for the demographic variables. EE acting together with PSS had a stronger negative relationship with ITQ with an  $r$  of  $-.471$  ( $p \leq .001$ ) as compared to the relationship when PSS acts alone with an  $r$  of  $-.399$  ( $p \leq .001$ ). This study provides evidence that suggests that the joint relationship of EE and PSS is additive in terms of the variable relationships noted by Southwood (1978) and is associated with lower levels of ITQ. The outcome is consistent with the results of the Shuck et al. (2011) study. As the zero order correlation coefficients add up to more than the joint correlation coefficient collinearity between EE and PSS is evident.

A stepwise multiple regression analysis was done to determine which of these variables (PSS, EE or PSSxEE) explained most of the variance in ITQ (see table 18 on page 42). PSS acting together with EE explained more of the variance in ITQ (adjusted  $r^2$  of  $.232$ ,  $p \leq .0001$ ) than PSS or EE acting alone. These results confirm that employees, who do not feel excited about their job, perceive their supervisors as being unsupportive and not valuing their contribution to the organisation will have increased propensity to want to leave the organisation than those who perceive their supervisors as supportive.

### **6.4 Research question 2**

#### **What is the joint relationship of EE and PCB with the employees' intention to quit?**

The partial correlation matrix in table 28 on page 46 displays the linear correlation coefficients of these variables after controlling for the demographic variables. EE acting together with PCB had a weak positive relationship with ITQ ( $r = .108$ ,  $p < .05$ ) as compared to the moderate negative relationship of PCB acting alone ( $r = -.455$ ,  $p \leq .0001$ ). Employees who are more enthusiastic about their jobs but perceive that their employer has not met all of their promises will have a lower intention to leave the organisation than those who are less enthusiastic. The low correlation coefficient suggests that the joint relationship effect of PCB and EE with ITQ is additive noting that separately these variables have much higher correlation coefficients.

A stepwise multiple regression analysis was done to determine which of these variables (PCB, EE or PCBxEE) explained most of the variance in ITQ (see table 23 on page 45). PCB acting together with EE explained no significant variance in ITQ. This suggests that EE cancels out the effects of PCB on ITQ to some extent and may warrant further research. PCB was found to explain more of the variance (change in  $r^2=.197$ ,  $p\leq.0001$ ) than EE (change in  $r^2.043$ ,  $p\leq.0001$ ). This study confirms that employees, who feel excited about their job but perceive that their organisation has revenged on its promises in the psychological contract, will not have a significantly increased propensity to want to leave the organisation. Consistent with literature, employees who perceive that their psychological contract has been breached by the organisation will have a significantly increased propensity to want to leave the organisation.

### **6.5 Research question 3**

#### **What is the moderating effect of EE on the relationship of PCB and PSS with employees' intention to quit?**

A two-way ANOVA was done to determine if there were significant differences in the relationship between PCB and ITQ based on different levels of EE.

##### **6.5.1 Moderating effect EE on PSS**

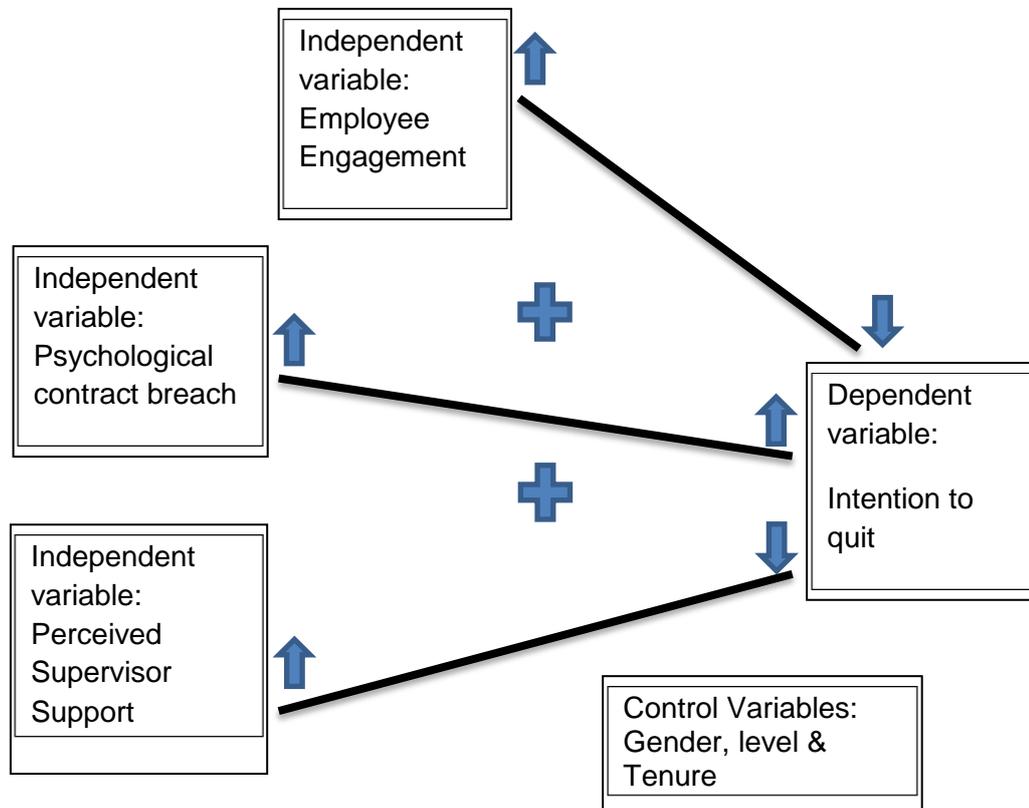
The results of the two-way ANOVA provide evidence that the relationship between PSS and ITQ does not vary significantly based on different levels of EE. EE is not proven to be a moderator of the PSS-ITQ relationship. The results indicate that level of an employees' ITQ is significantly related to their levels of EE and PSS based on the main effects observed in table 26 on page 47. Based on the results of this study the relationship effect of EE on PSS with ITQ is additive. Higher levels of both EE and PSS are proven in this study to be significantly associated with the desirable organisational outcome of lower ITQ.

##### **6.5.2 Moderating effect of EE on PCB**

The two-way ANOVA results provide evidence that the relationship of PCB with ITQ does not vary significantly at different levels of EE proving that E does not moderate the relationship. Based on these results it is evident that the level of an employees' EE is significantly related to their levels of PCB and EE as indicated by the main effects shown in table 28 on page 49. The relationship effects of EE and PCB with ITQ are additive and confirm that higher levels of EE and lower levels of PCB are associated with lower levels of ITQ.

Contrary to the conceptual model EE did not moderate the relationship between PSS and PCB; and ITQ. This suggests that extent of the benefits of managing the levels of PCB and PSS in terms of lower ITQ is not dependant on the level of EE. The revised model based on the outcomes is represented in figure 11.

**Figure 11 Revised conceptual model**



## 6.6 Finding

The main objective of this study was to determine the moderating effect of EE on the relationships between PSS and PCB; and ITQ. The study observation that EE has no significant moderating effect on these relationships but a significant main effect is interesting but consistent with studies by Saks (2006) and Shuck et al. (2011) which found that ITQ is a consequence of EE. The Saks (2006) and Sahoo and Mishra (2012) models of the antecedents and consequences of EE identify PSS as an antecedent of EE and ITQ as a consequence.

It is important to note that these models do not explicitly identify PCB as a key antecedent of EE though the noted drivers of EE in literature have some commonality with the drivers of PCB. The interesting outcome of this study is that stepwise regression analysis in research question 1 found that PCB was a stronger predictor of

EE then either PSS or EE. Consistent with studies in the developed economies the constructs of PCB, EE and PSS are all significantly associated with ITQ.

## **7. Conclusion**

The absolute effect of the level of EE on the relationships of PSS and PCB with ITQ was found to be additive and not one of moderation. This study has produced results that are consistent with past research in that PCB, EE and PSS were all found to have significant relationships with ITQ. PSS, PCB and EE can, based on the results of this study, be used by managers as indicators to detect possible risks of intentions to quit. As noted in the literature review the demands on organisations require them to retain critical resources to remain competitive and profitable. The direct and indirect costs associated with ITQ and as a result turnover justify the investment in management time and effort to manage the risks of ITQ.

### **7.1 Managerial implications**

- PCB: Employers need to make an effort to determine what the employees' expectations are in terms of the psychological contract. Meeting these obligations of managing the employees' expectations can reduce intentions to quit the organisation and ultimately the costs associated with turnover. The management of the psychological contract should form part of any set of management initiatives to reduce turnover intentions.
- PSS: Management should be aware of the potential adverse effect that supervisors who are not caring and appreciative have on an employees' intentions to quit. There may be issue that affect the attitude of supervisors to their employees that need to be managed to address risks to overall employee intentions to quit.
- EE: Engaged employees may not be as sensitive to unsupportive supervisors and breach of PC. Organisations facing high levels of intentions to quit should prioritise initiatives to reduce the breach of the psychological contract and to improve the employees' perception of supervisor support over initiatives around improving employee engagement.

### **7.2 Academic implications**

This study can add to the understanding of the factors that influence ITQ in organisations. The results demonstrate that there is need for further research on the variables associated with ITQ. The over emphasis of the importance of EE to organisations at the expense of attention to PCB may be misplaced as demonstrated in this study. Employees who feel that their organisations are not meeting their promises are of greater risk of quitting than those who experience low PSS and EE.

### **7.3 Future research**

This study found that there was no statistically significant moderation by EE of the relationships of PSS and PCB with ITQ suggesting that these concepts could benefit from further research. The study proves that EE is a construct that deserves further investigation in terms of its interactions with the variables that can predict ITQ. Of interest would be the identification of common drivers of higher PSS, EE and reduced PCB as organisations facing resource limitations could focus on these to improve employee retention. The finding that PCB explained more of the variance in ITQ than either EE or PSS was unexpected and could benefit from further research.

There is a need for longitudinal studies of these variables and their effects on ITQ. Most literature and this report are based on cross sectional studies which are limited in terms of determining causation. The theoretical model can be extended by including more independent variables and studying their interaction effects.

### **7.4 Limitations**

This study relies on employees to report their own perceptions of the variable items and as a result they may not have truthfully answered the questions put to them resulting in a response error (Weiers, 2008). A nonresponse error was also experienced as some employees did not complete the questionnaires (Weiers, 2008). These employees may have had different answers to those who did respond.

The employees' intention to quit was measured based on an established survey instrument but may be misinterpreted by employees who desire to merely change jobs within the organisation. Future research may choose to use instruments that measure both intentions to overcome this limitation.

This survey was based on one geographical area and company and is limited in its ability for generalisation of the population. The results may not reflect the nature of the defined population so further studies on these variables with varied organisations, demographic profiles and geographic locations will expand our understanding of ITQ, PCB, PSS and EE.

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## 9. Annexures

### 9.1 Annexure 1: Table of PSS Scale and Item statistics

	B1	B2	B3	B4	B5	B66new	B77new	B8	PSS	
N	Valid	448	449	448	449	447	449	449	448	444
	Missing	1	0	1	0	2	0	0	1	5
Mean	4.22	4.70	4.35	4.61	4.12	4.62	4.81	4.2	35.80	
Median	5.00	5.00	5.00	5.00	4.00	5.00	5.00	5.00	37.00	
Mode	6.0	7.0	6.0	6.0	5.0	7.00	7.00	6.0	20.00	
Std. Deviation	2.09	1.99	2.05	1.99	2.05	2.05	1.96	2.12	11.77	
Skewness	-.292	-.564	-.348	-.514	-.210	-.350	-.404	-.316	-.161	
Std. Error of Skewness	.115	.115	.115	.115	.115	.115	.115	.115	.116	
Kurtosis	-1.25	-.91	-1.15	-.96	-1.20	-1.08	-1.07	-1.31	-.95	
Std. Error of Kurtosis	.230	.230	.230	.230	.230	.230	.230	.230	.231	
Range	6.0	6.0	6.0	6.0	6.0	6.00	6.00	6.0	48.00	

### 9.2 Annexure 2: Table of PSS Alpha if item deleted

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
B1	31.5743	100.462	.802	.712	.832
B2	31.0766	103.055	.785	.735	.835
B3	31.4414	100.179	.833	.766	.828
B4	31.1914	103.780	.757	.667	.838
B5	31.6239	104.840	.700	.571	.844
B66new	31.1757	127.463	.147	.227	.901
B77new	30.9820	121.580	.299	.267	.885
B8	31.5631	102.707	.729	.598	.840

### 9.3 Annexure 3: Table of EE Scale and item statistics

	C1	C2	C3	C4	C5	C6	C7	C8	C9	EE	
N	Valid	448	449	447	449	447	447	448	446	449	438
	Missing	1	0	2	0	2	2	1	3	0	11
Mean	4.65	4.90	5.309	5.16	4.91	5.17	5.52	5.02	4.56	45.33	
Median	5.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	5.0	49.0	
Mode	6.0	6.0	7.0	7.0	7.0	7.0	7.0	6.0	6.0	53.00 <sup>a</sup>	
Std. Deviation	1.91	1.90	1.89	2.02	2.04	1.92	1.93	1.84	2.0	14.37	
Variance	3.67	3.62	3.60	4.08	4.17	3.69	3.72	3.38	4.00	206.44	
Skewness	-.56	-.68	-.98	-.84	-.71	-.93	-1.21	-.81	-.51	-.99	
Std. Error of Skewness	.11	.11	.11	.11	.11	.11	.11	.11	.11	.11	
Kurtosis	-.79	-.69	-.22	-.61	-.78	-.30	.21	-.32	-.95	.16	
Std. Error of Kurtosis	.23	.23	.23	.23	.23	.23	.23	.23	.23	.23	
Range	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	54.00	
Minimum	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	9.00	
Maximum	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	63.00	

a. Multiple modes exist. The smallest value is shown

### 9.4 Annexure 4: Table of EE Alpha if item deleted

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
C1	40.664	168.805	.684	.550	.938
C2	40.413	164.916	.779	.641	.933
C3	40.018	161.977	.848	.763	.929
C4	40.176	160.690	.813	.736	.931
C5	40.404	159.894	.818	.697	.930
C6	40.153	162.432	.823	.697	.930
C7	39.788	163.385	.801	.689	.931
C8	40.299	164.965	.808	.676	.931
C9	40.751	171.954	.577	.370	.944

### 9.5 Annexure 5: Table of PCB Scale and item statistics

		D1new	D2new	D3new	D4	D5	PCB
N	Valid	449	448	448	448	449	446
	Missing	0	1	1	1	0	3
Mean		2.97	2.91	3.01	2.66	2.64	14.22
Median		3.00	3.00	3.00	3.00	3.00	14.00
Mode		2.00	2.00	2.00	1.0	1.0	17.00
Std. Deviation		1.47	1.40	1.40	1.34	1.36	5.10
Variance		2.15	1.96	1.96	1.81	1.85	26.05
Skewness		.10	.17	.09	.27	.26	-.01
Std. Error of Skewness		.115	.115	.115	.115	.115	.116
Kurtosis		-1.40	-1.26	-1.29	-1.11	-1.11	-.43
Std. Error of Kurtosis		.23	.23	.23	.23	.23	.23
Range		4.00	4.00	4.00	4.0	4.0	20.00
Minimum		1.00	1.00	1.00	1.0	1.0	5.00
Maximum		5.00	5.00	5.00	5.0	5.0	25.00

### 9.6 Annexure 6: Table of PCB Alpha if item deleted

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
D1new	11.24	15.76	.70	.74	.69
D2new	11.23	15.97	.72	.82	.68
D3new	11.20	15.85	.73	.78	.68
D4	11.56	20.97	.26	.33	.83
D5	11.57	19.34	.41	.37	.79

### 9.7 Annexure 7: Table of ITQ Scale and item statistics

		E1	E2	E3	ITQ
N	Valid	449	448	447	447
	Missing	0	1	2	2
Mean		2.742	2.839	2.814	8.4004
Median		3.000	3.000	3.000	9.0000
Mode		1.0	1.0	1.0	3.00
Std. Deviation		1.4362	1.4990	1.5428	4.15758
Variance		2.063	2.247	2.380	17.285
Skewness		.169	.128	.141	.133
Std. Error of Skewness		.115	.115	.115	.115
Kurtosis		-1.248	-1.409	-1.448	-1.263
Std. Error of Kurtosis		.230	.230	.230	.230
Range		4.0	4.0	4.0	12.00
Minimum		1.0	1.0	1.0	3.00
Maximum		5.0	5.0	5.0	15.00

### 9.8 Annexure 8: Table of ITQ Alpha if item deleted

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
E1	5.658	8.302	.834	.712	.886
E2	5.557	8.144	.807	.656	.907
E3	5.586	7.535	.870	.761	.855

## 10. Appendices

## 10.1 Appendix 1 : Survey

### Questionnaire

#### Section A: Introduction and Informed consent

Dear ACSA colleague

This survey is intended to obtain your perception on certain aspects of your working experience at Airports Company South Africa.

The outcome of the survey may be used to inform management initiatives to enhance employee engagement and will be part of an academic research report that I am doing for a program with the Gordon Institute of Business Science on perceived supervisor support, psychological contract breach, employee engagement and the intent to leave.

You are asked to complete a questionnaire that should not take more than 15 minutes of your time.

Your participation is voluntary and you can elect to withdraw at any point without penalty.

No names are required so your answers are completely anonymous and all data will be kept strictly confidential.

By completing this questionnaire you are confirming that you are doing so voluntarily.

Should you have any questions or concerns you may contact me, the researcher or my supervisor. Contact details are provided below

Researcher	Supervisor
Name: Kesavan Naicker	Name : Prof. Steve Bluen
Email: Kesavan.naicker@airports.co.za	Email: stevebluen@vodamail.co.za
Telephone: 011 921 6550	Telephone: 082 924 2003

## Employee Questionnaire

This questionnaire consists of sections A to E with a total of 30 questions and should take approximately 15 minutes to complete

Section	Questions
A	1 - 5
B	1 - 8
C	1 - 9
D	1 - 5
E	21 - 3

Please complete all questions.

### Section A: Demographics

In this section you are asked to provide general background information. Please indicate your answer as per the guidelines.

1. Gender

Please indicate your gender by ticking the corresponding box

Male

Female

2. Age

Please indicate your age, as at your last birthday, in number of years.

My age is \_\_\_\_\_ years

3. Tenure

Please indicate your length of service with ACSA in number of years.

\_\_\_\_\_ years

4. Education level

Please indicate with an x your level of qualification.

Non	Matric or equivalent	Diploma or equivalent	3 year Degree	Masters or equivalent	PhD or equivalent

5. SOL level

Please indicate your SOL level by marking the appropriate box with an x.

SOL 1	SOL 2	SOL 3	SOL 4	SOL 5	SOL 6	SOL 7	SOL 8
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## **Section B: Perceived supervisor support**

Listed below are eight (8) statements that represent possible opinions that YOU may have about working for your supervisor at Airports Company South Africa (ACSA). Please indicate the extent of your agreement or disagreement with each statement by marking an x on the number on your answer sheet that best represents your point of view about your supervisor. Please choose from the following answers:

1	2	3	4	5	6	7
Strongly disagree	Moderately disagree	Slightly disagree	Neither agree or disagree	Slightly agree	Moderately agree	Strongly agree

1. My supervisor strongly considers my goals and values.	1	2	3	4	5	6	7
2. Help is available from my supervisor when I have a problem.	1	2	3	4	5	6	7
3. My supervisor really cares about my well-being.	1	2	3	4	5	6	7
4. My supervisor would forgive an honest mistake on my part.	1	2	3	4	5	6	7
5. My supervisor is willing to help me when I need a special favour.	1	2	3	4	5	6	7
6. If given the opportunity, my supervisor would take advantage of me.	1	2	3	4	5	6	7
7. My supervisor shows very little concern for me.	1	2	3	4	5	6	7
8. My supervisor cares about my opinions.	1	2	3	4	5	6	7

## **Section C: Employee Engagement**

The following nine (9) statements are about how you feel at work at ACSA. Please read each statement carefully and decide if you ever feel this way about your job. If you have never had this feeling, cross the number '1' with an x. If you have had this feeling, indicate how often you felt it by crossing the number (from 2 to 7) that best describes how frequently you feel that way.

1	2	3	4	5	6	7
Never	Almost never  (a few times a year or less)	Rarely (once a month or less.	Sometimes (a few times a month)	Often  (once a week)	Very often (a few times a week)	Always  (everyday)

1. At my work, I feel bursting with energy.	1	2	3	4	5	6	7
2. At my job, I feel strong and vigorous.	1	2	3	4	5	6	7
3. I am enthusiastic about my job.	1	2	3	4	5	6	7
4. My job inspires me.	1	2	3	4	5	6	7
5. When I get up in the morning, I feel like going to work.	1	2	3	4	5	6	7
6. I feel happy when I am working intensely.	1	2	3	4	5	6	7
7. I am proud of the work that I do.	1	2	3	4	5	6	7
8. I am immersed in my work.	1	2	3	4	5	6	7
9. I get carried away when I am working.	1	2	3	4	5	6	7

## **Section D: Psychological contract**

Listed below are five (5) statements that represent possible opinions that YOU may have about the extent to which your employer, the Airports Company South Africa (ACSA), has met your expectations. Please indicate the extent of your agreement or disagreement with each statement by marking an x on the number on your answer sheet that best represents your point of view about your employer. Please choose from the following answers:

1	2	3	4	5
Strongly disagree	Slightly disagree	Neither agree or disagree	Slightly agree	Strongly agree

1. Almost all the promises made by my employer during recruitment have been kept	1	2	3	4	5
2. I feel that my employer has come through in fulfilling the promises made to me when I was hired	1	2	3	4	5
3. So far my employer has done an excellent job of fulfilling its promises to me	1	2	3	4	5
4. I have not received everything promised to me in exchange for my contributions	1	2	3	4	5
5. My employer has broken many of its promises to me even though I've upheld my side of the deal	1	2	3	4	5

## **Section E: Intention to leave the organization**

Listed below are three (3) statements that represent possible opinions that YOU may have about your intentions to continue working for Airports Company South Africa (ACSA). Please indicate the extent of your agreement or disagreement with each statement by marking an x on the number on your answer sheet that best represents your opinion. Please choose from the following answers:

1	2	3	4	5
Strongly disagree	Slightly disagree	Neither agree or disagree	Slightly agree	Strongly agree

1. There is a good chance that I will leave this organization in the next year.	1	2	3	4	5
2. I frequently think of leaving this organization.	1	2	3	4	5
3. I will probably look for a new organization in the next year.	1	2	3	4	5