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The relationship between perceived performance appraisal justice on employee engagement outcome variables

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Abstract

Justice or fairness is a fundamental underlying principle in life. Not only do unfair practices have the potential for deep discontent, but it also potentially has a deep impact on employee engagement. While some research has been conducted on the relationship between perceived performance appraisal justice and employee engagement, this research goes deeper to understand if significant relationships exist between perceived performance appraisal justice and two of the most commonly cited outcome variables of employee engagement, viz. discretionary effort and intention to turnover.

This study aimed to identify if significant relationships existed between perceived performance appraisal justice and the abovementioned employee engagement outcome variables. These insights can help human resource practitioners in the designing of performance appraisal systems as well as with the training of managers who are supposed to conduct the appraisals, in order to unlock potential employee engagement value.

The hypotheses were tested using quantitative research methods. The required data was collected via a cross-sectional self-report online questionnaire. A final sample of 143 respondents was utilised for the statistical analysis. Construct validity and reliability of the measurement scales were tested. The hypotheses were tested using multiple regression analysis.

This study provided empirical evidence of a significant negative relationship between perceived performance appraisal justice and intention to turnover. Interventions to reduce intention to turnover and improve employee engagement should focus on perceived performance appraisal justice. This study thus contributes to the literature in the fields of employee engagement, justice, human resource development, human resource management and performance management.

Keywords

Employee engagement, perceived performance appraisal justice, discretionary effort, intention to turnover, fairness

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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Vikash Jawahar Date

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Chapter 1: Introduction to the Research Problem

1.1 Introduction

"Justice is the first virtue of social institutions, as truth is of systems of thought" (Rawls, 1971, p. 3). Justice or fairness is a fundamental underlying principle in life. Not only do unfair practices have the potential for deep discontent, but it also potentially has a deep impact on employee engagement.

In recent times, organisations have looked to improve employee engagement to enhance the performance of the organisation. Furthermore, Markos and Sridevi (2014) have highlighted that dis-engaged employees miss 3.5 more workdays on average, have lower productivity and results in a loss of $292 to $355 billion per year in the economy of the United States of America. Similarly, Shuck, Reio, and Rocco (2011) have highlighted "that disengaged employees cost the German economy approximately $263 billion, the Australian economy $4.9 billion and the Asian economy 2.5 billion annually" (p. 428). Ott (2007) has also stated that when, "compared with industry competitors at the company level, organizations with more than four engaged employees for every one actively disengaged employee saw 2.6 times more growth in earnings per share than did organizations with a ratio of slightly less than one engaged worker for every one actively disengaged employee" (para. 2) . Employee engagement can also be a source of competitive advantage (Albrecht, Bakker, Gruman, Macey, & Saks, 2015).

Furthermore, Gruman and Saks (2011) have argued that to enhance performance management systems, performance must be driven through employee engagement. In addition to this, Albrecht et al. (2015) have stated that to realise the claimed benefits of engagement; engagement has to be entrenched within human resource policies, practices and procedures. As a result, Albrecht et al. (2015) have attempted to merge human resource management literature and engagement literature which have, thus far to a large extent, run in parallel. Gruman and Saks (2011) have identified links between performance management and employee engagement, and have proposed an engagement management model, that merges the two aspects.

Intention to turnover and discretionary effort has been shown by Shuck, Reio and Rocco (2011) to be outcome variables of employee engagement and are believed to be some of the means in which employee engagement results in improved

organisational performance. N. Gupta and Sharma (2016) have stated that discretionary effort is responsible for enhanced productivity and profitability.

1.2 Research Motivation

"Performance appraisals are the process through which supervisors assess, after the fact, the job-related performance of their supervisees and allocate rewards to the supervisees based on that assessment" (Cappelli & Conyon, 2018, p. 88). Furthermore, they are essential in addressing "agency problems, prompting employees to act in the interests of the employer, and, as such, are a central practice in the field of management" (Cappelli & Conyon, 2018, p. 88). Performance appraisal is an important human resource management practice as it impacts the rewards of employees, and as such, its perceived fairness and the consequences thereof are important areas of research (Erdogan, 2002). Smith and Bititci (2017) have also proposed a theoretical model, which includes a link between employee engagement and performance. This research has aimed to improve employee engagement in order to unlock its benefits (Smith & Bititci, 2017). Furthermore, employees require a climate of trust and fairness to feel and act engaged (Albrecht et al., 2015).

Performance appraisal systems are increasingly being seen as an important link between employee behaviour and an organisation's strategic objectives (Dusterhoff, Cunningham, & Macgregor, 2014). Performance appraisal is a vital aspect of management and is often the means by which the organisation's objectives are filtered throughout the organisation, by defining, communicating and tracking the progress of goals and objectives (Dusterhoff et al., 2014). Performance management is critical in achieving the objectives of an organisation (Gruman & Saks, 2011). The effective management of employees through performance appraisals are linked with better corporate financial performance (Cook & Crossman, 2004).

The fairness of the appraisal system has been seen as an essential aspect with regards to the effectiveness and usefulness of the performance appraisal system (Erdogan, 2002). Furthermore, it has been suggested that employees will only be satisfied with an appraisal system if it is believed to be fair (Cook & Crossman, 2004). Over and above this, perceived justice is also related to organisational commitment, trust in management, intention to turnover and organisational

citizenship (Erdogan, 2002). Jawahar (2007) has shown that the perception of fairness or justice in performance appraisals has a significant bearing on employees' satisfaction with the appraisal system. If employees are satisfied with the performance appraisal system, they are more likely to utilise it to improve their performance. An employee's disagreement with the appraisal system will most likely result in lower organisational commitment and a higher intention to turnover. Furthermore, beyond these outcomes, Dusterhoff et al. (2014) have identified that the performance appraisal outcomes are affected by perceptions of fairness.

Based on the above, both employee engagement and the perceived fairness of performance appraisal systems can lead to improved organisational performance. Some linkages between the two constructs have been proposed (Gruman & Saks, 2011; Smith & Bititci, 2017); however, there has been limited research in this area. Moliner, Martínez-tur, Ramos, Peiró, and Cropanzano (2008) have looked at the relationship between organisational justice and employee engagement, while V. Gupta and Kumar (2013) have investigated the relationship between perceived performance appraisal justice and employee engagement within the context of Indian professionals. Furthermore, Albrecht et al. (2015) have also broadly stated that human resource management systems can influence perceptions of organisational climate, which can influence job demands and resources, which can influence personal resources such as the psychological safety, meaningfulness and availability, which affects engagement. These studies have, however, not been extended to the outcome variables of employee engagement.

1.3 Research Purpose

The benefits of employee engagement are numerous and have been documented by several researchers (Cook & Crossman, 2004; Harter, Schmidt, & Hayes, 2002; Markos & Sridevi, 2014; Permana, Tjakraatmadja, Larso, & Wicaksono, 2015). These benefits range from superior profitability and revenue growth to competitive advantage.

In order to harness the potential benefits of an engaged workforce, Human Resource Development practitioners, due to their roles in increasing individual and organisational performance, are being required to assist in the development of initiatives to create a more engaged workforce (Shuck et al., 2011). Understanding how perceived performance appraisal justice affects employee engagement,

discretionary effort and intention to turnover, can help human resource practitioners in the designing of performance appraisal systems as well as with the training of managers who are supposed to conduct the appraisals, in order to unlock potential employee engagement value. Furthermore, this link could be further utilised in strategy formulation to enhance the creation of strategic advantage, which would further assist the performance of the organisation.

Employee engagement and performance appraisals are aspects that are not limited to a particular field of study as the impacts, effects and management of these topics overarch several different fields of study. Studying the relationship between perceived performance appraisal justice and employee engagement, discretionary effort and intention to turnover is of interest to the academic fields of human resource development, human resource management and performance management and motivation theory, over and above employee engagement and justice literature.

1.4 Research Aims and Objectives of the Study

The purpose of this study will be to identify if significant relationships exist between perceived performance appraisal justice and two of the most commonly cited outcome variables of employee engagement, viz. discretionary effort and intention to turnover (Shuck et al., 2011). This has not been investigated before and is deemed to be an essential contribution to employee engagement and justice literature.

To better explain the results of the investigation between perceived performance appraisal justice and discretionary effort and intention to turnover, the relationship between employee engagement and, discretionary effort and intention to turnover will also be investigated, as the relationship between these variables was a contributing motivating factor for this research.

The main objectives of this research study are as follows:

- Objective 1: To determine the relationship between perceived performance appraisal justice and employee engagement.
- Objective 2: To determine the relationship between perceived performance appraisal justice and discretionary effort

- Objective 3: To determine the relationship between perceived performance appraisal justice and intention to turnover.
- Objective 4: To determine the relationship between employee engagement and discretionary effort.
- Objective 5: To determine the relationship between employee engagement and intention to turnover.

1.5 Research Scope

The research scope falls within the boundaries of South Africa. Quantitative data on perceived performance appraisal justice, employee engagement, discretionary effort and intention to turnover was gathered from individuals that undergo performance appraisals. The data were collected via a self-report electronic questionnaire.

1.6 Structure of the Research Report

This research report has seven chapters. Chapter one provides an overview of the purpose of this research as well as the motivation behind it. In Chapter two, a literature review is presented, providing an understanding of the theory behind this research study. The research hypotheses are formulated in Chapter three. Chapter four discusses the research methodology employed for this study. Chapter five provides a detailed analysis of the results, followed by an in-depth discussion of the results in Chapter six. Chapter seven summarises the main findings of this research, limitations of the study, implications for South African companies as well as areas for future research.

Chapter 2: Literature Review

2.1 Introduction

The literature review provides an understanding of the published literature related to the constructs under investigation in this study. This theoretical base provides the foundation upon which the research questions and hypotheses were formulated. The constructs of employee engagement, discretionary effort, intention to turnover and perceived performance appraisal justice were investigated with regards to their definitions, importance and measurement.

2.2 Employee Engagement

Employee engagement is a construct that initially started based on research conducted by Kahn (1990), where he introduced the concepts of personal engagement and disengagement. Employee engagement has evolved and been researched from many different perspectives, due to the broad nature of the construct and the number of other constructs that it overlaps (Cole, Walter, Bedeian, & O'Boyle, 2012; Saks, 2006). Employee engagement is said to be related to these constructs, such as organisational commitment and organisational citizenship behaviour, yet is still distinct (Saks, 2006). Two such distinctions are the two-way nature of employee engagement and the degree to which engaged employees are expected to have business awareness (Saks, 2006).

Due to this, there are several different definitions of employee engagement (Bailey, Madden, Alfes, & Fletcher, 2017; Saks & Gruman, 2014; Shuck & Wollard, 2010). For this study, the definition put forward by Shuck and Wollard (2010), based on seminal research, and for the purpose of further research in the field of Human Resource Development, is utilised. This is due to the fact that this research is aimed at providing recommendations for human resource practitioners in the fields of human resource development and performance management. Thus, the definition for employee engagement is "an individual employee's cognitive, emotional, and behavioural state directed toward desired organizational outcomes" (Shuck & Wollard, 2010, p.103).

Furthermore, according to Robinson, Perryman, and Hayday (2004),

> *"engagement contains many of the elements of both commitment and OCB [organisational commitment behaviour], but is by no means a perfect match*

> *with either. In addition, neither commitment nor OCB reflect sufficiently two aspects of engagement – its two-way nature, and the extent to which engaged employees are expected to have an element of business awareness."* (p. 8)

Hence there is a distinct difference between employee engagement, commitment and organisational commitment behaviour (OCB).

Employee engagement is crucial as it has been associated with superior profitability and revenue growth to competitive advantage. Furthermore, according to The World Bank (2019):

> *"The outlook for the global economy has darkened. Global financing conditions have tightened, industrial production has moderated, trade tensions remain elevated, and some large emerging market and developing economies have experienced significant financial market stress. Faced with these headwinds, the recovery in emerging market and developing economies has lost momentum."* (p. xvii)

Employee engagement is therefore significant under such global economic conditions (N. Gupta & Sharma, 2016), as discretionary effort has been identified as a critical outcome to deliver desired business outcomes. Employee engagement can also result in reduced turnover, assisting business with retention challenges (N. Gupta & Sharma, 2016). Furthermore, "employees who are highly engaged in their work roles not only focus their physical effort on the pursuit of role-related goals, but are also cognitively vigilant and emotionally connected to the endeavour" (Rich, Lepine, & Crawford, 2010, p. 619). Disengaged employees, on the other hand, withhold their physical, cognitive and emotional energies (Rich et al., 2010).

Discretionary effort and intention to turnover are outcome variables of employee engagement (Shuck et al., 2011). Discretionary effort has been defined as the extra effort that employees put into their jobs, above and beyond the minimum requirements (Shuck et al., 2011). Towers Perrin (2003) has defined this extra effort as "extra time, brainpower and energy" (p. 2). Based on the work of Bailey et al. (2017), discretionary effort can be referred to as or related to extra-role performance. Furthermore, according to Bailey et al. (2017), all the studies included in their narrative synthesis, focusing on extra-role performance, found links between engagement and extra-role performance, which included, citizenship

behaviour, innovative work behaviour, personal initiative, knowledge sharing and creativity. Carmeli and Weisberg (2006) have defined intention to turnover as the probability that an employee will leave their current job in the near future. It is conscious and deliberate and is the last part of the withdrawal cognition process.

Just as with the definition of employee engagement, there are several theories and models that have been utilised in research (Saks & Gruman, 2014). The three most utilised theories/models are Kahn's (1990) framework of personal engagement and disengagement, burnout theory, where engagement is seen as the positive antithesis of burnout (Maslach, Schaufeli, & Leiter, 2001) and social exchange theory (Cropanzano & Mitchell, 2005)

2.2.1 Kahn's Framework of Personal Engagement and Disengagement

Kahn (1990) originally laid the groundwork for the current day construct of employee engagement. One of Kahn's (1990) objectives was to identify the drivers in terms of how individuals use varying degrees of themselves in their role performances at work, i.e. how they "bring themselves" and "remove themselves" from certain task behaviours. He referred to this as how people adjust their selves in roles (Kahn, 1990). From a psychological and sociological perspective, Kahn (1990) postulated that people are uncertain or doubtful of being a part of groups, and look to protect themselves of being wholly consumed or alienated by the group or system, and they protect themselves by either moving toward or away from the group or system. This is done by adjusting their selves in role. Kahn (1990) defined this adjustment in roles as personal engagement and personal disengagement. These terms were means of describing the opposite ends of a continuum, in which people could bring themselves in terms of their job requirements.

Kahn (1990) defined personal engagement as "the harnessing of organization members' selves to their work roles; in engagement, people employ and express themselves physically, cognitively, and emotionally during role performances" (p. 694). Furthermore, personal engagement was seen as a state in which people employed and expressed their "preferred selves", which resulted in the elevation of "connections to work and to others, personal presence (physical, cognitive, and emotional), and active, full role performances" (Kahn, 1990; p. 700). Kahn's (1990) premise in this conceptualisation was that people have different versions or dimensions of themselves, which they employ to varying degrees to their work

roles, depending on the prevailing conditions. If the prevailing conditions are conducive, a person is then able to bring their preferred selves to a role where they are entirely immersed. When the person is completely engaged, there is no tension between their preferred selves and the work role requirements. The individual can express their real identity, thoughts and feelings.

Personal disengagement was defined as " the uncoupling of selves from work roles; in disengagement, people withdraw and defend themselves physically, cognitively, or emotionally during role performances" (Kahn, 1990, p. 694). Conversely to engagement, disengagement is the state in which people simultaneously withdraw and defend their preferred selves from the work role. A tension exists between a person's true self and their work role. This results in the individual removing their "personal, internal energies from physical, cognitive, and emotional labors" (Kahn, 1990; p. 701). Here the individuals hide their real identity, thoughts and feelings.

Kahn (1990) found that there were three conditions that either resulted in personal engagement or personal disengagement. These conditions are psychological meaningfulness, psychological safety and psychological availability. Psychological meaningfulness was considered as the emotional return, for the contribution of one's self through physical, cognitive and emotional energy. This meaningfulness manifests itself in the feeling of being worthwhile, useful and valuable. This meaningfulness is considered to be a component of a circular model, where an employee contributes to the performance of the organisation and receives feedback on their contributions (Shuck et al., 2011). This is something that is generally done as part of a performance appraisal.

Psychological safety was considered to be the condition, where a person can bring one's true self without the fear of negative consequences, i.e. a state where people would not be adversely affected for being fully engaged. Psychological availability is the perception of having the physical, emotional and psychological resources at a point in time, to be able to fully immerse oneself into the work role. This is a measure of how ready an individual is to give their full selves to the work role while having other demands to contend with due to being a part of other social systems. (Kahn, 1990)

In general, employees that are highly engaged, “not only focus their physical effort on the pursuit of role-related goals, but are also cognitively vigilant and emotionally connected to the endeavour” (Rich et al., 2010, p. 619). These efforts can be applied independently; however, when engaged, one applies these efforts simultaneously and in a reinforcing manner (Kahn, 1992). This framework has been seen as being multidimensional, empirically tested and shows the dormant conditions of an employees’ willingness to be engaged, which has been considered a limitation of other frameworks (Shuck et al., 2011).

Building on this, Shuck, Twyford, Reio, and Shuck, (2014) referred to these efforts as being cognitive engagement, emotional engagement and behavioural engagement. Cognitive engagement can be defined as, “an individuals’ appraisal of whether their work is meaningful and safe (physically, emotionally, and psychologically), as well as whether they have sufficient resources to complete the presented task or opportunity at the expected proficiency level” (Shuck et al., 2014, p. 245). Emotional engagement is an “employee’s willingness to involve personal resources such as pride, belief, and knowledge following a positive cognitive appraisal (Shuck et al., 2014, p. 246). Behavioural engagement or physical engagement manifests itself in increased levels of actual performance (Shuck et al., 2014).

2.2.2 Job Demands and Resources Model of Burnout

Maslach et al. (2001) summarised burnout as what:

“started out as important, meaningful, and challenging work becomes unpleasant, unfulfilling, and meaningless. Energy turns into exhaustion, involvement turns into cynicism, and efficacy turns into ineffectiveness.” (p. 416).

Demerouti, Bakker, Nachreiner, and Schaufeli (2001) originally introduced the job demands and resources model of burnout, based on Maslach's (1982) definition of burnout. They have, however, shown, that burnout is not only a phenomenon in the human services sector but can be generalised to all sectors or areas.

The concept of emotional exhaustion was broadened to encapsulate stress reactions that include fatigue, job-related depression, psychosomatic complaints and anxiety, as well as job stressors such as workload and role problems (Demerouti et al., 2001). Similarly, depersonalisation was characterised by

withdrawal or mental distancing, which could emerge as a result of alienation, disengagement or cynicism with regards to the work role (Demerouti et al., 2001). Feelings of reduced personal accomplishment were, however, not considered as a separate component of the model, due to the fact that emotional exhaustion and depersonalisation were considered to be core components of burnout, they had a stronger correlation with each other as compared to reduced personal accomplishment, and reduced personal accomplishment had the weakest significant relationship with other variables (Demerouti et al., 2001).

Demerouti et al. (2001) have defined job demands as physical, social, or organisational components of the job, which requires continuous mental and physical effort, which lead to psychological and physiological costs. Saks and Gruman (2014) further define typical job demands as comprising work overload, job insecurity, role ambiguity, time pressure, and role conflict.

Job resources, on the other hand, are the physical and psychological, social or organisational components of the work role that may be “functional in achieving work goals”, “reduce job demands at the associated physiological and psychological costs” and “stimulate personal growth and development” (Demerouti et al., 2001; p. 501). According to Bakker and Demerouti (2007), these resources can come from the organisation, interpersonal and social relations within the organisation and from the actual task itself. Job resources further help employees to cope with job demands by having a buffer effect on possible burnout (Bakker & Demerouti, 2007). Organisational and social resources include “job control, potential for qualification, participation in decision making, task variety” and “support from colleagues, family, and peer groups” (Demerouti et al., 2001, p. 501).

Based on their research, burnout takes place under a particular set of conditions. High job demands are a predictor of exhaustion; however, this does not on its own result in disengagement (Demerouti et al., 2001). When job resources are lacking, high levels of disengagement are predicted, but not exhaustion. Burnout occurs when both disengagement and exhaustion co-occur (Demerouti et al., 2001).

Xanthopoulou et al. (2007) have also expanded the JDR model to include personal resources which identify individual traits that govern an individual’s resiliency. They have identified some of these traits as optimism, self-efficacy and organisational based self-esteem.

2.2.3 Social Exchange Theory

According to Bailey, Madden, Alfes, and Fletcher (2017), social exchange theory has been the second most used theory in employee engagement behind the job demands and resources model. In social exchange theory, although there are different views, there is a consensus that it involves a series of interactions that generate obligations. Furthermore, these actions are viewed as being interdependent and contingent on the actions of another. The foundational ideas of social exchange theory are rooted in rules and norms of exchange, exchanges of resources and the relationships that exchange. (Cropanzano & Mitchell, 2005)

One of the founding principles of social exchange theory is that “relationships evolve over time into trusting, loyal and mutual commitments” (Cropanzano & Mitchell, 2005, p. 875). This is facilitated by rules that govern the exchange. These rules form a “normative definition of the situation that forms among or is adopted by the participants in an exchange relation” (Emerson, 1976; p. 352). There are several exchange rules outlined in social exchange theory; however, the one that seems most utilised in management research is the expectation of reciprocity (Cropanzano & Mitchell, 2005). Reciprocity is a two way, bidirectional exchange, that in its simplest form involves something being given and something being returned.

If employees feel that they are treated well and fairly, they will reciprocate in kind, by displaying discretionary effort for their employers' benefit (Bailey et al., 2017). Furthermore, Alfes, Shantz, Truss, and Soane (2013) have stated that “people will become engaged with their work through investing intellectual effort, experiencing positive emotions and meaningful connections with others when antecedents are in place that signal to employees that they are valued and trusted” (p. 334). Furthermore, according to Saks (2006), employees choose to engage themselves to varying degrees, depending on the resources received from their organisations. If the organisation does not provide these resources, then the employee is likely to disengage themselves from their work roles. Therefore, what an employee is willing to give of themselves in the performance of their work roles is contingent upon the economic and socio-emotional resources that an organisation is willing to provide (Saks, 2006).

2.2.4 Comparison of Employee Engagement Theory

According to Saks (2006), Kahn's (1990) framework and that of (Maslach et al., 2001) focus more on the necessary psychological conditions, for employee engagement, but they do not explain why employees may respond to these conditions to varying extents. Social exchange theory, however, provides the theoretical backing that fills in this gap (Saks, 2006). According to Rich et al. (2010), Kahn's (1990) construct of employee engagement which combines the several aspects of the self in work role performance is more comprehensive, in comparison to other mechanisms that are more narrow aspects of the self. Furthermore, employee engagement is distinguishable from other related constructs such as organisational commitment, organisational citizenship behaviour and job involvement (Saks, 2006).

Kahn's (1990) theory of personal engagement was, therefore believed to be the most fitting theory for employee engagement in this study. Due to this, employee engagement was measured by the instrument developed by Rich et al. (2010), as it encompasses the broad and simultaneous conditions of the physical, cognitive and emotional states of an individual, which is consistent with Kahn's (1990) theory of engagement.

2.3 Outcomes of Employee Engagement

A number of outcome variables have been associated with employee engagement, such as job satisfaction, organisational commitment, intention to turnover, organisational citizenship behaviour and discretionary effort (Saks, 2006; Shuck et al., 2011). Due to the fact that this study is intended to assist human resource practitioners with regards to harnessing employee engagement to improve company performance, discretionary effort and intention to turnover were the selected outcome variables that suited the scope of this study best, as they are the two most utilised outcome variables in relation to performance (Shuck et al., 2011). These are also the two most practical and promising variables that could be utilised by human resource practitioners, internationally (Shuck et al., 2011). Furthermore, intention to turnover is one of the more useful and common benchmarks that human resource development practitioners use as a measurement indicator with regards to the success of human resource interventions (Shuck et al., 2011).

2.3.1 Discretionary Effort

As with employee engagement, there are several different definitions for discretionary effort. Shuck et al. (2011) defined discretionary effort "as an employee's willingness to go above minimal job responsibilities" (p. 431). Towers Perrin (2003) defined discretionary effort as "extra time, brainpower and energy" (p. 2). These definitions and others share a common thread in that discretionary effort is linked to extra effort, and as such is usually related to performance (Lloyd, 2008).

Furthermore, Lloyd (2008) alludes to the fact that discretionary effort is operationalised as a behaviour, and it is differentiated from motivation, where motivation is "the degree to which employees are willing to expend effort on the job" (Dubinsky & Hartley, 1986, p. 37), whereas effort is "the means by which motivation is translated into accomplished work" (Parsons, 1968, cited in Brown & Leigh, 1996, p. 362). Furthermore, discretionary effort is voluntary, cannot be enforced and applies to all jobs (Lloyd, 2008).

The significance of discretionary effort to organisations is twofold. Firstly the productivity levels of employees would be high, thus resulting in reduced employee costs (fixed costs) for equivalent work outputs. Secondly, when employees go above and beyond what is required of them and exert more energy into their work, it can result in the superior performance of an organisation as compared to its competitors.

2.3.2 Intention To Turnover

Intention to turnover has been defined as the probability that an employee will leave their current job in the near future (Carmeli & Weisberg, 2006). It is a conscious and deliberate desire of an employee to leave the employ of their employer and is considered to be the last step in the turnover decision process, in that an employee will first have the intention to turnover, before actually quitting their job (Mobley, Horner, & Hollingsworth, 1978). Furthermore, the research of Steel and Ovalle, (1984), purported that turnover intentions were a better indicator of turnover than "overall job satisfaction, satisfaction with the work itself, or organizational commitment" (p. 673). In the turnover cognition process, intention to turnover refers to thoughts of quitting, the intention to search for another job elsewhere, and the intention to quit, but not the actual act of quitting (Carmeli & Weisberg, 2006).

The importance of intention to turnover for an organisation is centred around the costs of hiring new employees, the cost of training new employees as well as the reduced productivity in the period during which a new employee goes through the learning curve and becomes proficient and productive. Furthermore, in certain instances, it is rare to find employees with scarce skills, and it is imperative to retain these employees and to simultaneously ensure that they are as productive as possible. The loss of a good and productive employee will result in losses in the investments made in those employees.

2.4 Performance Appraisals

There are several definitions of what performance appraisals are in the literature. For example, Cappelli and Conyon (2018) have defined performance appraisals as "the evaluation of an employee's job performance over the previous period by one's supervisor" (p. 88), DeNisi and Murphy, (2017) have defined performance appraisals as an infrequent formal process where, "employees are evaluated by some judge (typically a supervisor) who assesses the employee's performance along a given set of dimensions, assigns a score to that assessment, and then usually informs the employee of his or her formal rating," (p. 421) and DeNisi and Pritchard (2006) have referred to performance appraisals as a "discrete, formal, organizationally sanctioned event, usually not occurring more frequently than once or twice a year, which has clearly stated performance dimensions and/or criteria that are used in the evaluation process" (p. 254). Based on this, it is clear that performance appraisals are used to evaluate the performance of employees. But what is the need for such an assessment? Why is it important to measure the performance of an employee?

Performance appraisals are but one part of the broader process of performance management. Performance management includes several activities, policies, procedures and interventions that are intended on improving employee performance (DeNisi & Murphy, 2017). Performance management also consists of the receiving of feedback, goal setting, training and a rewards system (DeNisi & Murphy, 2017). According to DeNisi and Murphy (2017), performance appraisals are the starting point, before which the improvement of employees performance can be focussed on, in accordance with the strategic goals of the organisation, with the ultimate goal of improving the organisation's performance. Performance appraisals are therefore central to this process and are, therefore, a fundamental

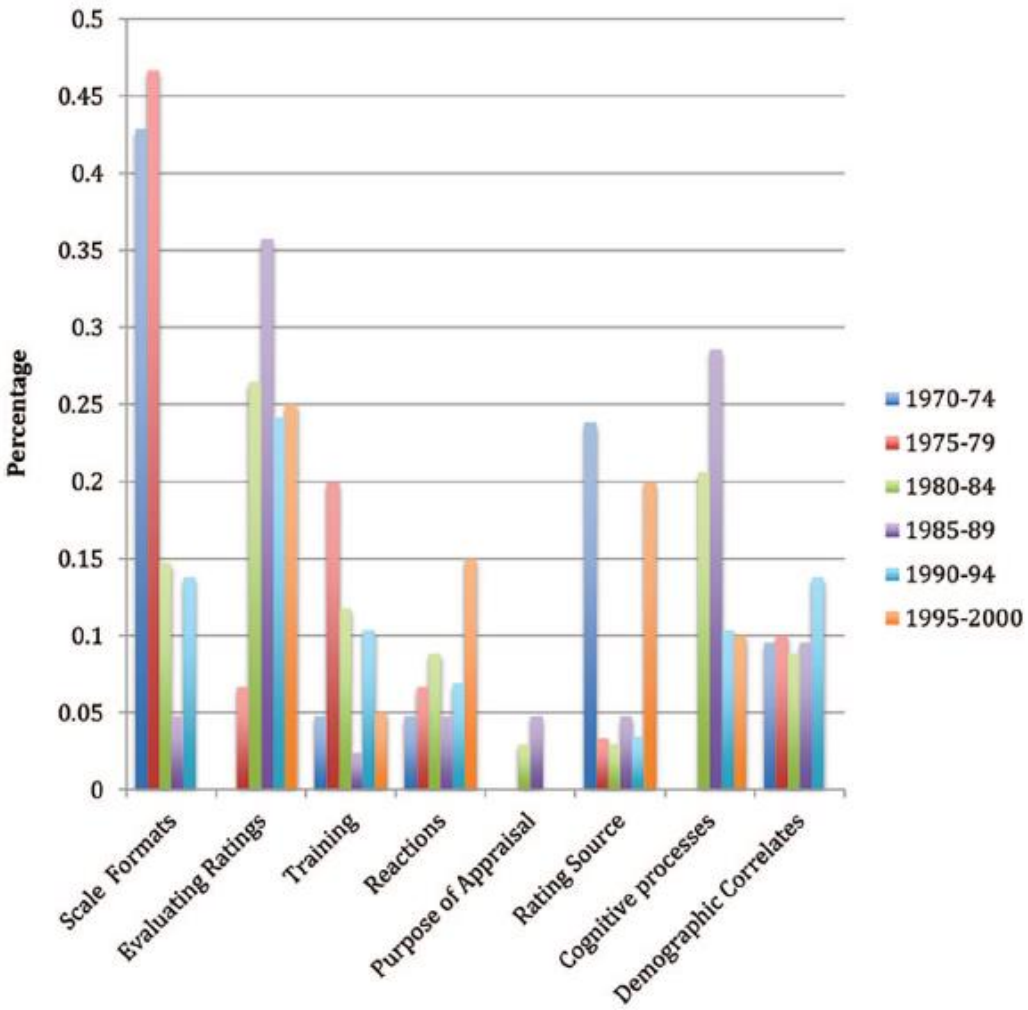
process within a business, due to its role in performance management. Performance appraisals can also be considered as being quite common due to its extensive use. In a survey by the Aberdeen Group (2010) (as cited by Cappelli & Conyon, 2018), performance appraisals are utilised by 91% of employers globally.

Research has taken place with regards to performance appraisals for well over the last 100 years (DeNisi & Murphy, 2017). Most of the initial research has focussed on rating accuracy (Cappelli & Conyon, 2018; DeNisi & Murphy, 2017; DeNisi & Pritchard, 2006; Fulk, Brief, & Barr, 1985; Harris, 1994).

In recent times, the focus has much shifted towards the drivers of employee performance (DeNisi & Murphy, 2017; DeNisi & Pritchard, 2006).

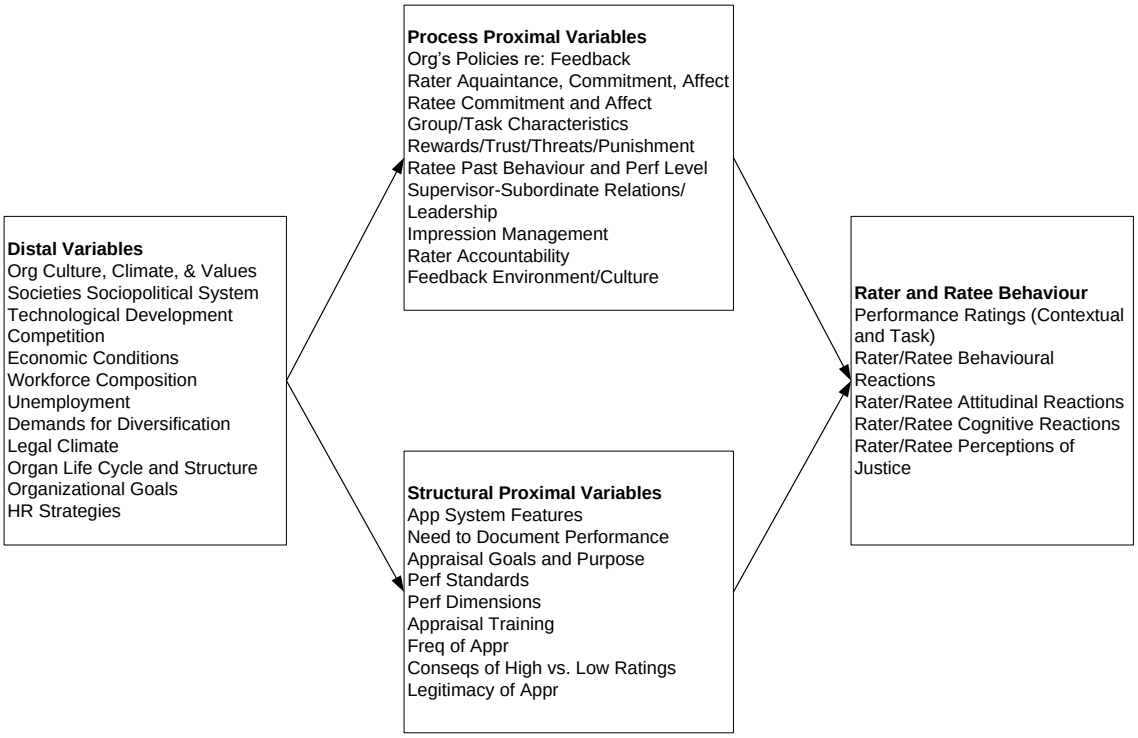
Figure 1 shows the significant trends in performance appraisal research from 1970-2000.

Figure 1: Trends in performance appraisal research, 1970–2000. Extracted from DeNisi and Murphy (2017)



Levy and Williams (2004), have also reviewed performance appraisal literature, and have indicated that the trend has moved towards the social context of the appraisal process, i.e. that the "performance appraisal takes place in a social context and that context plays a major role in the effectiveness of the appraisal process and how participants react to that process" (p. 883). Levy and Williams (2004) reviewed approximately 360 articles from the period 1995-2003, and have summarised and categorised the broad social context variables from their research.

Figure 2: The Social Context of Performance Appraisals (Authors Own, adapted from(Levy & Williams, 2004))



Distal variables have been, "construed as contextual factors that affect many human resource systems, including performance appraisal" (Levy & Williams, 2004, p. 885). Process proximal variables affect how the appraisal process is conducted, while structural proximal variables pertain to the actual structure or makeup of the appraisal (Levy & Williams, 2004). Rater and ratee issues are factors that affect the rater and ratee. It is important to note that research has been historically focussed on rater issues; however, research on ratee issues was a relatively new direction. Levy and Williams (2004) went to the extent of stating that perhaps, "no area within the PA [performance appraisal] literature has seen as dramatic an increase in research attention since 1990 as ratee reactions to PA processes" (p. 889). According to Levy and Williams (2004), research into ratee reactions to performance appraisals, have taken two paths, i.e. research based on performance appraisal ratings and rewards, and research based on the components of the performance appraisal system, that result in increased motivation.

The research focusing on motivation have looked at participation, fairness and perceptions of fairness (Pettijohn, Pettijohn, Taylor, & Keillor, 2001; Roberts, 2003).

Furthermore, Pettijohn et al. (2001) have shown that perceptions of fairness have a positive relationship with job satisfaction and organisational commitment.

2.5 Perceived Performance Appraisal Justice

2.6 Organisational Justice

Justice is a term that is used to refer to “oughtness” or “righteousness” (Colquitt, Conlon, Wesson, Porter, & Ng, 2001, p. 425). Organisational justice “refers to theories of social and interpersonal fairness that may be applied to understanding behavior in organizations” (Cropanzano & Greenberg, 1997, p. 318). The perception of fairness or justice has been rooted in organisational justice theory (Cook & Crossman, 2004). Organisational justice theory is complicated and has been described as “lacking any established research paradigm or unifying theory” and having “only limited conceptual agreement” (Cropanzano & Greenberg, 1997 p. 361).

One of the first theories in justice literature was that of equity theory (Colquitt et al., 2001). In equity theory, an outcome’s fairness can be determined by comparing the ratio of an individual’s inputs to outcomes and comparing that ratio with that of a comparison other (Colquitt et al., 2001). This can be considered as an equity rule. Several other equity rules have also been suggested, such as equality and need (Colquitt et al., 2001).

Originally, justice research focussed on the fairness of decision outcomes (Colquitt, 2001, Colquitt, 2012). This area was referred to as distributive justice. Research carried out identified that in legal proceedings, both the fairness of the result (verdict), and the fairness of reaching the result (courtroom process), was crucial (Colquitt, 2001; Colquitt, 2012). This lead to the birth of procedural justice that was further investigated and “broadened the conceptualisation of procedural justice in the context of resource allocation decisions” (Colquitt, 2012, p. 527). Here procedural justice was based on the fact that “allocation procedures would be viewed as fair when they adhered to “several “rules,” including consistency, bias suppression, accuracy, correctability, and ethicality” (Colquitt, 2012, p. 527).

Based on fairness from a recruitment perspective, it was found that there was a third important dimension in justice; that of an interpersonal interaction during the process (Colquitt et al., 2001; Colquitt, 2012). This third dimension was referred to

as interactional justice, and it was posited that this type of justice was important when figures of authority communicated "procedural details in a respectful and proper manner, and justified decisions using honest and truthful information" (Colquitt, 2012, p. 527). Interactional justice was then differentiated into interpersonal justice and informational justice, where interpersonal justice was a distinct component that reflected respect, whereas informational justice reflected justification and truthfulness (Colquitt et al., 2001; Colquitt, 2012).

The construct of organisational justice has thus been broken down into several sub-categories. Distributive justice and procedural justice have long been identified as critical components of this construct; however, there have been varying views with regards to interactional justice and informational justice, with regards to whether they should be considered separately or not (Colquitt, 2001). Furthermore, in some instances, there is evidence, that in the minds of many people, procedural justice and distributive justice are not distinct factors (Colquitt et al., 2001). The research conducted by Colquitt (2001) provides evidence of the validity of a four factor construct for organisational justice, with the factors being procedural justice, distributive justice, interpersonal justice and informational justice. Colquitt (2001) further developed a measurement scale for the construct that could be applied to specific contexts, while still being relevant to a wide variety of contexts. This scale was utilised by Jawahar (2007) and V. Gupta and Kumar (2013) to measure perceived performance appraisal justice, in their studies.

2.7 Factors of Perceived Performance Appraisal Justice

When considering perceived performance appraisal justice, the factors of organisational justice are applied to the context of performance appraisals. Colquitt (2001) developed a four factor scale that could be adapted to measure justice based on different contexts.

2.7.1 Distributive Justice and Performance Appraisal Justice

Distributive justice is concerned with the decision outcomes and more so with regards to allocation, such as equity and equality (Colquitt, 2001). With regards to performance appraisal fairness, this is concerned with the rewards concerning the work that is expended (Erdogan, 2002; Dusterhoff et al., 2014).

2.7.2 Procedural Justice and Performance Appraisal Justice

Procedural justice refers to the fairness of the procedures and policies used to make decisions (Colquitt, 2001). In terms of performance appraisals, it relates to the procedures that are followed as part of the appraisal process (Dusterhoff et al., 2014; Erdogan, 2002). Justice is enhanced through processes and procedures that lack biases, are consistent and accurate (Dusterhoff et al., 2014).

2.7.3 Interpersonal Justice and Performance Appraisal Justice

Interpersonal justice is concerned with the interpersonal treatment of the person through the enactment of the procedures and processes (Colquitt, 2001). With regards to appraisals, this refers to treating people with dignity, respect and due consideration (Dusterhoff et al., 2014).

2.7.4 Informational Justice and Performance Appraisal Justice

Informational justice refers to transparency and trustworthiness or the reduction of secrecy and dishonesty (Colquitt, 2001). Informational justice could even refer to explanations of the procedures and processes and the reasoning behind them. Erdogan (2002) further emphasises the importance of truthfulness and justification.

2.8 Performance Appraisals and Employee Engagement

Based on the above literature, there seems to be a link between aspects of performance appraisals and employee engagement, especially around perceptions of fairness. Research from Albrecht et al. (2015) supports the fact that a climate of trust and fairness is required, for employees to feel and act engaged. Saks (2006) has shown that procedural justice and distributive justice were positively related to job satisfaction and organisational commitment, which were further demonstrated to be outcome variables of employee engagement. Maslach and Leiter (2008) have also stated that “employees who perceive their supervisors as being both fair and supportive are less susceptible to burnout and are more accepting of major organizational change” (p. 500).

Fairness has been related to many positive attitudes and behaviours, such as satisfaction, trust and organisational citizenship (Collins & Mossholder, 2017). Furthermore, employees view their supervisors' support as being indicative of the organisations' support (Saks, 2006). Saks (2006) has further postulated that “individuals who are more engaged are likely to be in more trusting and high-quality relationships with their employer and will, therefore, be more likely to report more

positive attitudes and intentions toward the organization" (p. 607). The perception of fairness with regards to performance appraisals can, therefore, affect the trust relationship between employees and the organisation/supervisor. This is important from an employee engagement perspective, as Kahn's (1990) research on engagement has shown that supportive and trusting interpersonal relationships, promoted psychological safety, and May, Gilson, and Harter (2004) have found that "positive supervisor relations were positively related to psychological safety" (p. 11).

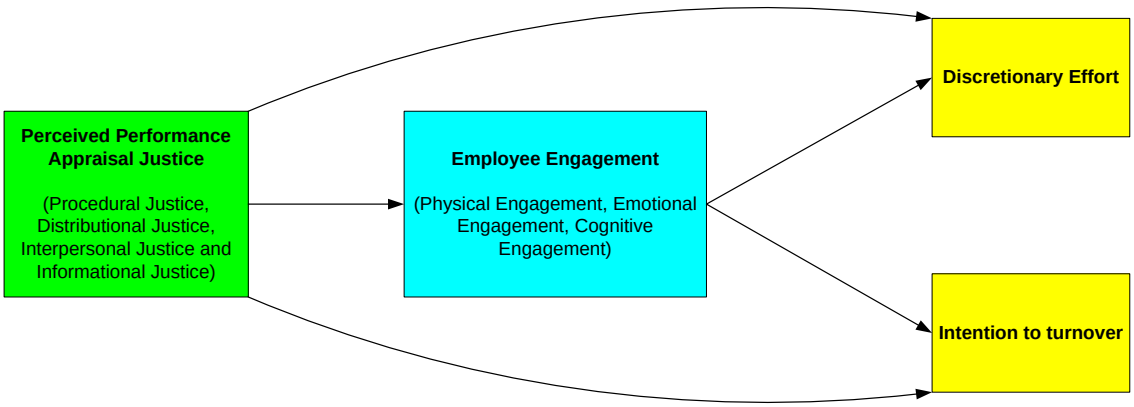
2.9 Conclusion

This research study aims to investigate if there are significant relationships between the following variables:

- Perceived performance appraisal justice and employee engagement.
- Perceived performance appraisal justice and discretionary effort.
- Perceived performance appraisal justice and intention to turnover.
- Employee engagement and discretionary effort.
- Employee engagement and intention to turnover.

The empirical research justifies why these relationships might occur. An increased understanding of these relationships will assist the raters of performance appraisals and human resource development practitioners to better perform their duties with regards to improving organisation performance through employees. A conceptual model is shown in Figure 3.

Figure 3: Conceptual model



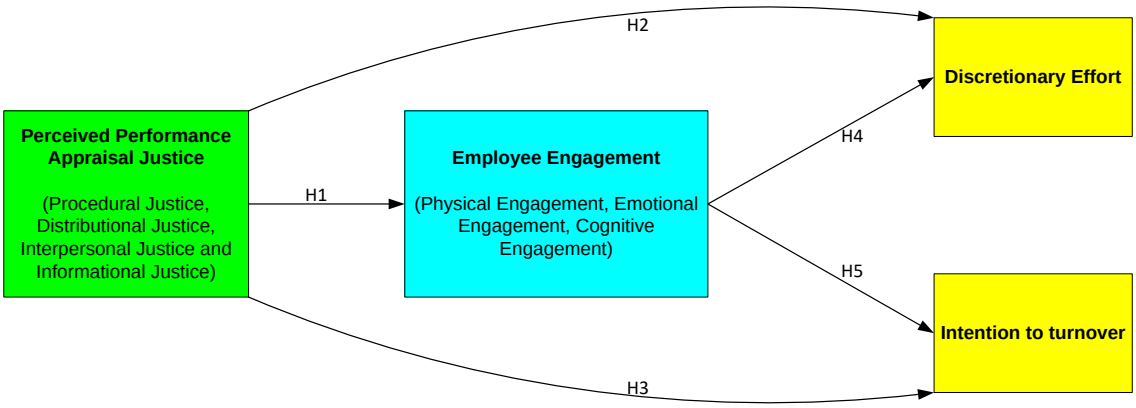
Chapter 3: Research Hypotheses

3.1 Introduction

V. Gupta and Kumar (2013) have shown the relationship between the perceived justice of performance appraisals and employee engagement in India, and Shuck et al. (2011) have shown the relationship between employee engagement and the outcome variables of discretionary effort and intention to turnover. The aim of this research is to extend the research of perceived performance appraisal justice and employee engagement to the outcome variables of discretionary effort and intention to turnover.

Based on the theoretical discussion presented in the previous sections, the hypotheses that were formulated are shown in Figure 4.

Figure 4: Research Hypotheses



3.2 Research Hypotheses

Hypothesis 1

Research Question 1: Is there a significant relationship between the perceived fairness/justice of performance appraisals and employee engagement?

- **Null Hypothesis one ($H_0$1)**: No significant relationship exists between the perceived fairness/justice of performance appraisals and employee engagement.
- **Alternate Hypothesis one ($H_1$1)**: A significant relationship exists between the perceived fairness/justice of performance appraisals and employee engagement.

Hypothesis 2

Research Question 2: Is there a significant relationship between the perceived fairness/justice of performance appraisals and discretionary effort?

- **Null Hypothesis one ($H_0$2)**: No significant relationship exists between the perceived fairness/justice of performance appraisals and discretionary effort.
- **Alternate Hypothesis one ($H_1$2)**: A significant relationship exists between the perceived fairness/justice of performance appraisals and discretionary effort.

Hypothesis 3

Research Question 3: Is there a significant relationship between the perceived fairness/justice of performance appraisals and intention to turnover?

- **Null Hypothesis one ($H_0$3)**: No significant relationship exists between the perceived fairness/justice of performance appraisals and intention to turnover.
- **Alternate Hypothesis one ($H_1$3)**: A significant relationship exists between the perceived fairness/justice of performance appraisals and intention to turnover.

Hypothesis 4

Research Question 4: Is there a significant relationship between employee engagement and discretionary effort?

- **Null Hypothesis one ($H_0$4)**: No significant relationship exists between employee engagement and discretionary effort.
- **Alternate Hypothesis one ($H_1$4)**: A significant relationship exists between employee engagement and discretionary effort.

Hypothesis 5

Research Question 5: Is there a significant relationship between employee engagement and intention to turnover?

- **Null Hypothesis one ($H_0$5)**: No significant relationship exists between employee engagement and intention to turnover.
- **Alternate Hypothesis one ($H_1$5)**: A significant relationship exists between employee engagement and intention to turnover.

3.3 Conclusion

Five hypotheses have been formulated to answer the research questions. The methodology utilised to test these hypotheses is discussed in the next chapter.

Chapter 4: Research Methodology

4.1 Research Design

The aim of this research was to determine if a relationship exists between the constructs of the perceived performance appraisal justice and employee engagement. Furthermore, the outcomes of the study were intended to be objective and generalisable; hence a positivist paradigm was followed to yield unambiguous and accurate knowledge that is not influenced through interpretation or biases (Saunders & Lewis, 2018).

In this research, a conceptual framework was developed using existing theory, and this framework was tested by means of hypothesis testing to further develop and build on the existing theory. A deductive approach is one where the researcher develops theory and hypothesis and then tests the hypotheses (Saunders, Lewis, & Thornhill, 2009). As such, a deductive approach was utilised.

The data required to test the hypotheses were collected by a self-completed questionnaire. This implies that the data was unbiased by the data collection technique. Furthermore, the questionnaire made use of existing measurement scales to collect quantitative data. Since this research was aimed at determining the relationship between variables to determine if they influence each other, a quantitative correlational methodology was utilised (Creswell, 2012). The design was descripto-explanatory, as the research sought to identify perceptions of performance appraisal justice and how this may influence employee engagement.

The time available for this study was limited. As a result, this was a cross-sectional study, i.e. the data was collected in a single moment in time, and thus provides a snapshot of the current situation (Zikmund, Babin, Carr, & Griffin, 2009).

4.2 Unit of Analysis

The unit of analysis refers to the individuals or organisations that provided the data for the study (Creswell, 2012; Zikmund et al., 2009). In the case of this study, the unit of analysis was employed individuals that undergo performance appraisals.

4.3 Population

The population for this study was all employees that undergo some form of performance appraisal in South Africa. The target population was employees that undergo performance appraisals in South Africa.

4.4 Sampling Method and Size

This study made use of convenience sampling, as this type of sampling can be used to obtain large numbers of completed questionnaires, quickly and economically, which was a requirement for this cross-sectional study (Zikmund et al., 2009). A questionnaire was therefore prepared and submitted to as many individuals in the target population, to obtain as many respondents as possible. This was combined with snowball sampling, where the respondents were encouraged to forward the questionnaire to other individuals who fit the unit of analysis criteria, to increase the number of potential respondents (Creswell, 2012).

This type of sampling is nonprobability sampling (Creswell, 2012; Saunders et al., 2009; Zikmund et al., 2009). In nonprobability sampling, the chance or probability of a sample unit being selected from the population is unknown (Saunders et al., 2009). This implies that it is not technically correct to use data obtained from this type of sampling to make statistical inferences about the population (Saunders et al., 2009). This is because there are no known statistical techniques that can be used to determine the random sampling error (Zikmund et al., 2009). The “haphazard” way of selecting the sample, introduces a bias (Zikmund et al., 2009). Nevertheless, even with these issues, and due to “situational and financial constraints, researchers in many fields rely heavily upon convenience sampling” (Yang, Wang, & Su, 2006, p. 604).

The sample size is important as a large sample size can reduce sampling error and increase the generalisability of results (Yang et al., 2006). According to Cohen (1992), four variables must be taken into account when determining a sample size (N). These variables are the significance criterion (α), power, the number of independent variables and the effect size (ES).

The significance criterion is the risk of mistakenly rejecting the null hypothesis (H_0), which is a Type I error. Typically, α is accepted to be 0.05, which provides a 95% confidence level. A Type II error is the failure to reject H_0. The probability of making a Type ii error is referred to as β. β is dependent on α, ES and N. Power is defined

as the probability of rejecting a false H_0 and is thus 1-β. Cohen (1988) has suggested that the power value be set at 0.8 as a convention, such that β=0.2. Cohen (1988) based this on the fact, that just as α cannot be made infinitesimally small because power becomes too small. Power cannot approach 1.00 as the required sample size becomes too large. Cohen (1988), therefore suggested that the trade-off must be made considering the consequences of the two types of errors. Based on this, Cohen (1988) proposed:

> *"that more often than not, the behavioral scientist will decide that Type I errors, which result in false positive claims, are more serious and therefore to be more stringently guarded against than Type II errors, which result in false negative claims. The notion that failure to find is less serious than finding something that is not there accords with the conventional scientific view."* (p. 56)

In line with this, Cohen (1988) proposed that α be kept at 0.05 based on convention and that β be assigned a value of 0.2, such that the ratio of β to α is four, implying that the seriousness of Type I errors are four times as serious as Type II errors.

The ES is the degree to which H_0 is believed to be false. "The degree to which H_0 is false is indexed by the discrepancy between H_0 and H_1 and is called the ES. Each statistical test has its own ES index" (Cohen, 1992, p. 156). Cohen (1992) has determined the comparative ES index values for different statistical tests based on their effects and has classified them as small, medium and large. This is shown in Table 1 below.

Table 1: ES Indexes and their values for small, medium and large effects (Authors own, adapted from Cohen (1992))

	Test	ES index	Effect size		
			Small	Medium	Large
1	m_A vs m_B for independent means	$d = \frac{m_A - m_B m}{\sigma}$	.20	.50	.80
2	Significance of product moment *r*	r	.10	.30	.50
3	r_A vs. r_B for independent r_S	$q = z_A - z_B$ $where\ z = Fisher's\ z$	.10	.30	.50
4	*P* =.5 and the sign test	$g = P - .50$	.05	.15	.25
5	P_A vs. P_B for independent proportions	$h = \varphi_A - \varphi_B$ $where\ \varphi = arcsine\ transformation$	.20	.50	.80
6	Chi-square for the goodness of fit and contingency	$w = \sqrt{\sum_{i=1}^{k} \frac{(P_{1i} - P_{0i})^2}{P_{0i}}}$	.10	.30	.50
7	One-way analysis of variance	$f = \frac{\sigma_m}{\sigma}$	.10	.25	.40
8	Multiple and multiple partial correlation	$f^2 = \frac{R^2}{1 - R^2}$	.02	.15	.35
Note. ES = population effect size					

Cohen (1992) has further used the information from Table 1 and calculated the minimum sample sizes required for different statistical tests. This is shown in Table 2 below.

Table 2: Minimum sample size for small, medium and large ES at Power = .8 for α = .01, .05, .10 (Authors own, adapted from Cohen (1992))

		α								
		.01			.05			.10		
	Test	Sm	Med	Lg	Sm	Med	Lg	Sm	Med	Lg
1	Mean dif	586	95	38	393	64	26	310	50	20
2	Sig *r*	1163	125	41	783	85	28	617	68	22
3	*r* dif	2339	263	96	1573	177	66	1240	140	52
4	*P* = .5	1165	127	44	783	85	30	616	67	23
5	*P* dif	584	93	36	392	63	25	309	49	19
6	x^2									
	1*df*	1168	1 30	38	785	87	26	618	69	25
	2*df*	1388	154	56	964	107	39	771	86	31
	3*df*	1546	172	62	1090	121	44	880	98	35
	4*df*	1675	186	67	1194	133	48	968	108	39
	5*df*	1787	199	71	1293	143	51	1045	116	42
	6*df*	1887	210	75	1362	151	54	1113	124	45
7	ANOVA									
	2*g*[a]	586	95	38	393	64	26	310	50	20
	3*g*[a]	464	76	30	322	52	21	258	41	17
	4*g*[a]	388	63	25	274	45	18	221	36	15
	5*g*[a]	336	55	22	240	39	16	193	32	13
	6*g*[a]	299	49	20	215	35	14	174	28	12
	7*g*[a]	271	44	18	195	32	13	159	26	11
8	Mult *R*									
	2*k*[b]	698	97	45	481	67	30			
	3*k*[b]	780	108	50	547	76	34			
	4*k*[b]	841	118	55	599	84	38			
	5*k*[b]	901	126	59	645	91	42			
	6*k*[b]	953	134	63	686	97	45			
	7*k*[b]	998	141	66	726	102	48			
	8*k*[b]	1039	147	69	757	107	50			

Note. ES = population effect size, Sm = small, Med = medium, Lg = Large, diff = difference, ANOVA = analysis of variance. Tests numbered as in Table 1.

[a] Number of groups. [b] Number of independent variables

This table was used to determine the minimum sample size for this study. Based on the model proposed in chapter three, there was a maximum of four independent variables that would be used in the correlational analysis. Thus for an α =0.05 and

medium effect size, the minimum sample size for the multiple correlation analyses was 84.

4.5 Data Collection

The questionnaire was developed based on existing measurement scales. This questionnaire was programmed on Typeform™, an online questionnaire platform, and to collect the data that was required for this study.

Prior to the mass distribution of the questionnaire, the questionnaire was submitted to a test group to identify any potential issues or problems with the questionnaire. The respondents from this test group provided direct feedback to the author. They were able to easily navigate through the questionnaire, understand the questions and select the appropriate options. The average time taken to complete the questionnaire during this pilot test was approximately six to seven minutes.

The online link was communicated to potential respondents via email, WhatsApp, and LinkedIn. These respondents were further asked to forward the link to other likely respondents, to increase the reach of the survey to as many likely respondents as possible.

4.6 Data Coding

Once the data collection period had come to an end, the data that had been collected was downloaded from Typeform™ in the form of a Microsoft Excel spreadsheet. The data was analysed to identify which responses were valid based on the screening question. The invalid responses were removed from the dataset that was used for analysis. The remaining data were coded in Microsoft Excel into a more suitable form for analysis in IBM SPSS (Version 25). A codebook was collated to easily identify each item in the study by a code name, description and its position in the data matrix. This codebook is included in the appendix.

The coded data were then imported into IBM SPSS (Version 25). The gender, tenure and age variables were coded as nominal scale categorical data. The data collected for employee engagement, discretionary effort, intention to turnover and perceived justice, was done so on a Likert scale. This data was coded as interval data because this data had rank order and “distance in terms of ‘how much more or how much less’ an object possesses of a given characteristic” (Wegner, 2016, p. 12)

4.7 Measurement instruments

The final questionnaire contained a screening question and several different instruments to measure the various variables of interest. The screening question was necessary to ensure that the respondents were, in fact, a part of the research population. All the measuring instruments used a five point Likert scale to obtain ordinal data.

All the measurement scales are included in the Appendix.

4.7.1 Discretionary Effort Scale

Lloyd's (2008) seven item discretionary effort scale was utilised. Lloyd (2008) reported an $\alpha = 0.87$. Shuck et al. (2011) reported an $\alpha = 0.93$ based on their study.

4.7.2 Intention to Turnover Scale

Colarelli's (1984) three item intention to turnover scale was utilised, as it has been shown to have an $\alpha = 0.75$. Furthermore, this scale was used by Saks (2006) and Shuck et al. (2011). The Cronbach alpha coefficients from these studies were 0.82 and 0.81, respectively.

4.7.3 Employee Engagement Scale

The job engagement scale derived by Rich, Lepine and Crawford (2010) was used to measure employee engagement, as it was better suited to the definition of employee engagement utilised in this study, as compared to other measurement scales like the Utrecht Work Engagement Scale (UWES) scale, which is based on vigour, dedication and absorption (Schaufeli, Bakker, & Salanova, 2006). The dimensions of the job engagement scale had reliabilities varying from 0.89-0.94, with an overall aggregated job engagement scale reliability of 0.94 (Rich et al., 2010).

4.7.4 Perceived Performance Appraisal Justice Scale

Colquitt's (2001) four factor scale was used. This measurement scale was used in studies of perceived performance appraisal justice by Jawahar (2007) and V. Gupta and Kumar (2013). The procedural justice scale had an $\alpha = 0.78$, the interpersonal justice scale had an $\alpha = 0.79$, the informational justice scale had an $\alpha = 0.79$, and the distributional justice scale had an $\alpha = 0.92$ (Colquitt, 2001). V. Gupta and Kumar (2013) reported Chronbach alpha coefficients of 0.78, 0.84, 0.81 and 0.90 respectively.

4.8 Data Analysis

4.8.1 Data Cleaning

The first step in the data analysis was to clean the data. The data imported into IBM SPSS (Version 25) was cleaned and further coded where necessary. The data cleaning process included identifying missing data and identifying the most appropriate way to resolve any missing data issues. Roth (1994) considered the various missing data techniques and suggested the following framework on how to handle missing data based on the amount and pattern of missing data.

Table 3: Suggested Missing Data Techniques According to Amount and Pattern of Missing Data (Authors own, adapted from (Roth, 1994)

Amount of missing data	Pattern of missing data		
	Missing completely at random	**Missing at random**	**Non-missing at random**
1-5%	1. Pairwise 2. Any MDT OK[b]	1. Hot-deck 2. ML 3. Regression	1. ML 2. Hot-deck or regression
6-10%	1. Pairwise 2. Regression or Hot-deck	1. Hot-deck 2. ML 3. Regression	1. ML 2. Hot-deck or regression
11-15%	1. Pairwise 2. Regression or Hot-deck	1. Hot-deck 2. ML 3. Regression	1. ML
16-20%	1. Pairwise 2. Regression or Hot-deck	1. Hot-deck 2. ML	1. ML
While the amount and pattern of missing data are two of the major determinants of MDT decisions, other factors may also influence researchers			
[b]Researchers should consider the specific pattern of missing data noted in the text.			
[c]Mean substitution should be avoided unless the amount of missing data is in the lower part of this range			

This framework was utilised to manage missing data in this study.

4.8.2 Outliers

The second step in the data analysis was to remove outliers because several statistical tests are sensitive to outliers (Pallant, 2007). Mahalanobis distance and the critical chi-squared value were used to determine the outliers (Pallant, 2007).

The number of degrees of freedom that was used to determine the chi-squared value was based on the number of independent variables (Pallant, 2007).

4.8.3 Construct Validity and Reliability

The third step in the data analysis process was to investigate the validity and reliability of the constructs that were measured by the various scales utilised in this study. “Validity is often defined as the extent to which an instrument measures what it purports to measure” (Kimberlin & Winterstein, 2008, p. 2278). Validity is typically determined through factor analysis. The type of factor analysis is dependent on what is required to be achieved based on an exploratory or confirmatory perspective. From an exploratory perspective, it is, “useful in searching for structure among a set of variables or as a data reduction method” (Hair, Black, Babin, & Anderson, 2014, p. 92). For this perspective, the techniques do not utilise any constraints for the estimation of the number of components to be extracted (Hair et al., 2014). There is no prior research; hence, an exploratory approach is utilised.

If however, prior research is available, the researcher may have preconceived ideas on the structure of the data. In such instances, the approach is to identify how well the data fit the existing structure in a confirmatory manner (Hair et al., 2014). Thus, in summary, confirmatory factor analysis (CFA) “attempts to confirm hypotheses and uses path analysis diagrams to represent variables and factors, whereas EFA [exploratory factor analysis] tries to uncover complex patterns by exploring the dataset and testing predictions” (Yong & Pearce, 2013, p. 79).

Thus, for the purpose of this study, CFA was conducted to determine the validity of the constructs, because existing measurement scales were utilised. In CFA, the three most widely accepted forms of validity are discriminant validity, convergent validity and nomological validity (Hair et al., 2014). “Discriminant validity is the degree to which two conceptually similar concepts are distinct” (p. 124), “convergent validity assesses the degree to which two measures of the same concept are correlated” and “nomological validity refers to the degree that the summated scale makes accurate predictions of other concepts in a theoretically based model” (Hair et al., 2014, p. 124).

Before conducting any factor analysis, the Kaiser-Meyer-Olkin (KMO) index and Bartlett's test of sphericity were inspected to determine whether factor analysis was a feasible option. The KMO test is a measure of the shared variance of the items

(Beavers et al., 2013). The index organisation's from 0-1 with a minimum value of 0.6 recommended as a good value for factor analysis (Pallant, 2007). The table below shows the interpretation guidelines for the KMO test.

Table 4: Interpretation guideline for the Kaiser-Meyer-Olin test (Authors own, adapted from Beavers et al. (2013)).

KMO Index Value	Degree of Common Variance
0.90 to 1.00	Marvellous
0.80 to 0.89	Meritorious
0.70 to 0.79	Middling
0.60 to 0.69	Mediocre
0.50 to 0.59	Miserable
0.00 to 0.49	Don't factor

Bartlett's test of sphericity is a statistical "test for the overall significance of all correlations within a correlation matrix" (Hair et al., 2014). In this test, the null hypothesis states that the observed correlation matrix is equal to the identity matrix, "suggesting that the observed matrix is not factorable" (Beavers et al., 2013, p. 4). This test should, therefore, be significant ($p<.05$) for the factor analysis to be appropriate (Pallant, 2007).

It is not possible to conduct a CFA analysis with IBM SPSS (Version 25) alone. An add-in called IBM AMOS (Version 26) was required to conduct the CFA analysis with IBM SPSS (Version 25). When performing a CFA, for convergent validity, the average variance extracted (AVE) must be greater than 0.5. For discriminant validity, the maximum shared variance (MSV) must be greater than the AVE, and the square root of AVE must be greater than inter construct correlations (Hair et al., 2014).

Where validity failed using CFA, EFA was conducted. EFA involves determining eigenvalues. Eigenvalues are a measure of how much variance is explained by each factor (Zikmund et al., 2009, p. 594). The following procedure was followed

Table 5: EFA procedure utilised in this study. Authors own, based on (Pallant, 2007)

Step	Purpose	Possible methods	Method utilised
Factor extraction	The determination of the smallest number of factors that can be used to represent the interrelations among the set of variables best	1. Principal components 2. Principal factors 3. Image factoring 4. Maximum likelihood factoring 5. Alpha factoring 6. Unweighted least squares 7. Generalised least squares.	Principal components analysis. This is the most commonly used approach
Number of factors to retain	This involves balancing two conflicting needs, i.e. the need to find a simple solution with as few factors as possible, and the need to explain as much of the variance in the original data set as possible.	1. Kaiser's criterion - Factors with an eigenvalue of 1 or more are retained 2. Scree test - This involves plotting each of the eigenvalues of the factors and inspecting the plot to find a point at which the shape of the curve changes direction and becomes horizontal. All factors above the elbow, or break in the plot are retained as these factors contribute the most to the explanation of the variance in the data set. 3. Parallel analysis - This involves comparing the size of the eigenvalues with those obtained from a randomly generated data set of the same size. Only those eigenvalues that exceed the corresponding values from the random data set are retained.	Scree tests and Parallel analysis was conducted.
Factor rotation and interpretation	To assist in the interpretation of the factors, the factors are 'rotated'. This presents the pattern of loadings in a manner that is easier to interpret. SPSS does not label or interpret each of the factors, however, it shows you which variables group together. These groups must then be interpreted based on the underlying theory and past research.	1. Varimax 2. Quartimax 3. Equamax 4. Direct Oblimin 5. Promax	Varimax rotation was utilised as it is the most commonly used rotation technique.

Further to the above, principal components analysis is used to extract maximum variance from the data set with each component and therefore reducing a large number of variables into a smaller number of components (Yong & Pearce, 2013).

Hair et al. (2014) has also considered the practical significance of factor loadings and have stated that "practical significance of the loadings is an important criterion" (p. 115). Hair et al. (2014) have suggested the following guidelines when the sample size is 100 and larger and where practical significance is more important than statistical significance.

- *"Factor loadings in the range of ±.30 to ±.40 are considered to meet the minimal level for interpretation of structure.*
- *Loadings ±.50 or greater are considered practically significant.*
- *Loadings exceeding 1.70 are considered indicative of well-defined structure and are the goal of any factor analysis."* (p. 115)

Once the above was completed, the results were further assessed for convergent and discriminant validity. For convergent validity, it is best to have factor loadings of at least 0.5 and averaging to at least 0.7 for each factor (Gaskin, 2016).

Since discriminant validity refers to the degree to which factors are unique and uncorrelated, variables should relate more strongly to their own factor than to another factor. Ideally, variables should load significantly only on one factor. If they load significantly on more than one factor, i.e. they have cross loadings, then the cross-loadings should differ by more than 0.2 (Gaskin, 2016). Furthermore, when examining the factor correlation matrix, correlations between factors should not exceed 0.7 (Gaskin, 2016).

Reliability is a measure of a measurement scale's internal consistency (Zikmund et al., 2009). "This is the degree to which the items that make up the scale are all measuring the same underlying attribute" (Pallant, 2007, p. 6). The reliability of a measurement scale is typically estimated by Cronbach's alpha (Kimberlin & Winterstein, 2008). Furthermore, Kimberlin and Winterstein (2008) have stated that "Having multiple items to measure a construct aids in the determination of the reliability of measurement and, in general, improves the reliability or precision of the measurement" (p. 2277). For a measurement scale to be deemed reliable, the

Cronbach alpha should be > 0.7 (Pallant, 2007). Zikmund et al. (2009) have proposed the interpretation of the Chronbach alpha coefficient as shown in Table 6

Table 6: Interpretation of the Chronbach alpha coefficient (Authors own, adapted from Zikmund et al. (2009)).

Chronbach alpha	Interpretation of the coefficient with respect to reliability
0.8-.95	Very good reliability
0.7-.79	Good reliability
0.6-0.79	Fair reliability

However, with scales shorter than ten questions, it is common to have low Cronbach alpha values, and in cases like this, it may be more appropriate to determine the mean inter-item correlation, which should be between 0.2 to 0.4 (Pallant, 2007). Based on this, Chronbach's alpha was determined for each measurement scale.

4.8.4 Descriptive Statistics of the Population

The fourth step in the data analysis process was to determine the descriptive statistics to describe the population. The mean, median, standard deviation, skewness, and kurtosis, of the various constructs, were determined to describe the sample. Furthermore, there are two main ways in which a sample can deviate from a normal distribution (Field, 2009). The first is concerning a lack of symmetry, referred to as skewness. Here the most frequent scores of the distribution are clustered at one end of the scale. The distribution can either be positively skewed, where the scores are clustered at the lower end of the scale or negatively skewed where the scores are clustered at the higher end of the scale (Field, 2009; Wegner, 2016). Typically, a skewness coefficient of <-1 and >1 indicate excessive skewness (Wegner, 2016). Furthermore, Bulmer (1967) has stated that a distribution with a skewness coefficient between 0 and 0.5 is fairly symmetrical, and a distribution with a skewness between 0.5 and 1 is moderately skewed.

The second is concerning the pointiness or Kurtosis. This refers to how the data clusters at the ends of the distribution and how pointy a distribution is (Field, 2009). A distribution with long tails and a long narrow peak is referred to as being a leptokurtic distribution (Bulmer, 1967). If the distribution has few points in the tails and is flatter than normal, it is referred to as platykurtic (Bulmer, 1967). A normal

distribution has a kurtosis of three. If the kurtosis is less than three, it is platykurtic, and if it is greater than three, it is leptokurtic (Bulmer, 1967).

4.8.5 Multiple Regression Analysis

The fifth step of the analysis was to test the hypotheses. To test if relationships exist between variables as per the hypotheses, multiple regression analysis was conducted to identify if significant relationships existed between the independent variables and the dependent variable as per the various hypotheses described in chapter 3. This type of analysis is based on the following assumptions, which also had to be verified before the regression analysis.

- Sample size. Knofczynski and Mundform (2008) have suggested a minimum sample size of 90 when using multiple regression. The size of the sample in this study was 147, which was sufficient.
- Multicollinearity and singularity. Multicollinearity occurs when the independent variables are highly correlated, i.e. $r \geq 0.9$ (Pallant, 2007). The variance inflation factor (VIF) was assessed, where if the VIF was close to one, there was no concern, and where the VIF was ≥10, this indicated multicollinearity (Field, 2009). Singularity refers to the situation where one independent variable is actually a combination of other independent variables (Pallant, 2007).
- Outliers. Multiple regression is sensitive to outliers (Pallant, 2007). As discussed earlier in this chapter, outliers were identified using the Mahalanobis distance and critical chi-square number.

Furthermore, this analysis provided an indication of the variance in the dependent variable, that was as a result of the independent variables.

In simple regression, the strength of a correlation can be explained by means of the correlation coefficient. Cohen (1988) showed that the strength of association between the independent and dependent variable can be determined based on the value of the correlation coefficient. Cohen (1988) suggested the categorisation shown in Table 7 based on effect size.

Table 7: Interpretation of the Correlation Coefficient (Authors own, adapted from Cohen (1988))

Co-efficient value	Strength of association
0.10<|r|<0.30	Small/Weak
0.31<|r|<0.50	Medium/Moderate
|r|>0.51	Large/Strong

When there are multiple predictor variables, IBM SPSS, determines a value, labelled multiple R (Field, 2009). Values of multiple R are a gauge as to how well the model predicts the observed data (Field, 2009). R^2 can be interpreted in the same way as in simple regression (Field, 2009).

4.9 Limitations of the Study

- The sampling method was a limitation with regards to the representativity of the entire study population, which reduces the level of generalisability of the study (Saunders et al., 2009).
- A limitation of self-completed questionnaires is that respondents may not fully understand the questions in the questionnaire and will not be able to clarify any uncertainties. This could influence the data.
- This research was conducted in South Africa, which is regarded as an emerging economy. South Africa is currently struggling to achieve economic growth, and this could affect the results of the study.
- The scales used in this study lacked validation in a South African context. This was overcome by conducting factor analysis and determining the Chronbach alpha coefficients to ensure validity and reliability.
- This research made use of cross-sectional and self-report data which could result in common method bias (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003).

4.10 Conclusion

This chapter provided an in depth discussion with regards to the methods utilised to test the hypotheses formulated in Chapter three. Quantitative research methods were employed. Missing data were resolved by using imputed means. Outliers were identified and removed from the sample dataset. The KMO test was conducted to determine if factor analysis could be utilised for validity. Confirmatory and exploratory factor analysis was conducted to verify the validity of the constructs. The Chronbach alpha coefficients were determined to ascertain the

reliability of the measurement scales. Multiple regression analyses were used to test the strength of the relationship between the variables for each hypothesis.

Chapter five provides a more detailed account of the statistical tests conducted and the interpretation of the results of the statistical analyses.

Chapter 5: Results

5.1 Introduction

This chapter provides a detailed account of the statistical analysis that was outlined in Chapter four. The discussion of the hypothesis testing for each hypothesis is presented separately.

5.2 Data Cleaning

During the data collection period, a total of 164 responses were received. Based on the screening question, 16 responses had to be discarded, as these respondents did not undergo a performance appraisal.

The maximum number of data points from the 148 valid respondents was 7644. Of this, missing data accounted for 22 data points. Based on this, the missing data was only 0.29%. The amount of missing data for each variable was determined, and the percentage was computed. The missing data for each variable ranged from 0.00% to 2.03%. Littles's MCAR test had a significance (p) of 0.989. In this test, the null hypothesis is that the missing variables are missing completely at random. Since p>.05, the null hypothesis was accepted. The missing data were missing completely at random. Due to this, and the low amount of missing data, based on Table 3, any missing data technique could be used, even mean substitution.

Initially, the pairwise deletion was considered; however, it was not compatible with the Mahalanobis distance calculation, which was essential to identify outliers. The mean substitution missing data technique was therefore used to resolve any missing data issues in the subsequent statistical analyses. Based on Mahalanobis distance and the critical chi-squared value, the dataset contained five outliers, which were subsequently removed from the data set. The remaining 143 cases made up the sample that was used for further data analysis.

5.3 Sample Description

In Figure 5 below, it can be seen that females made up 45% of the sample, while males made up 55% of the sample.

Figure 5: Gender Distribution

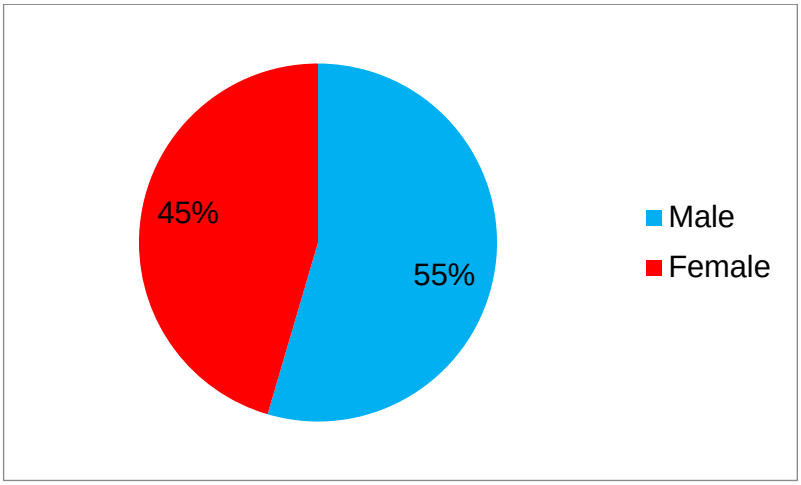


Figure 6 shows the frequencies and percentages associated with the respondents' age. The majority of the respondents were between the ages of 30 and 39 years

Figure 6: Age Distribution

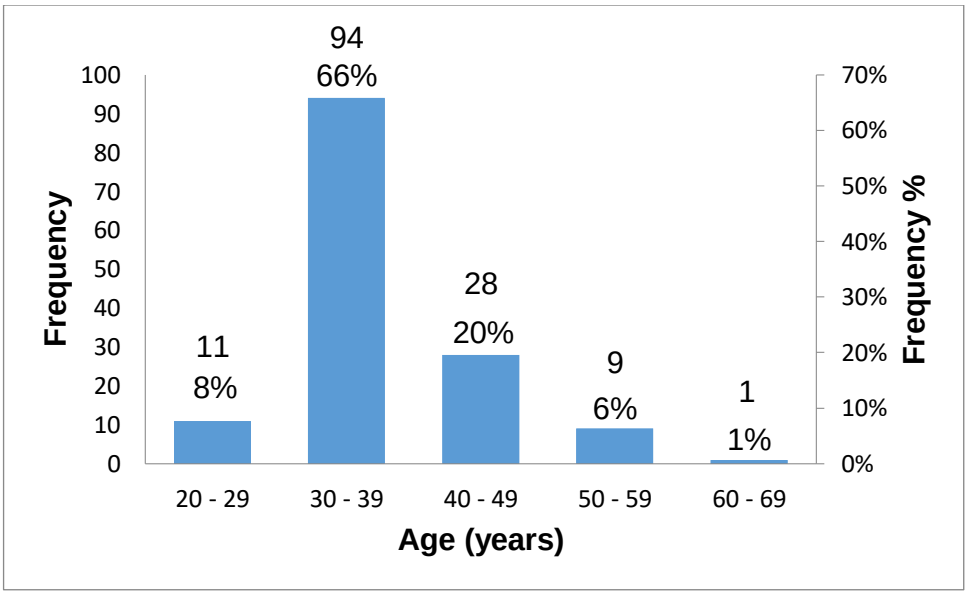
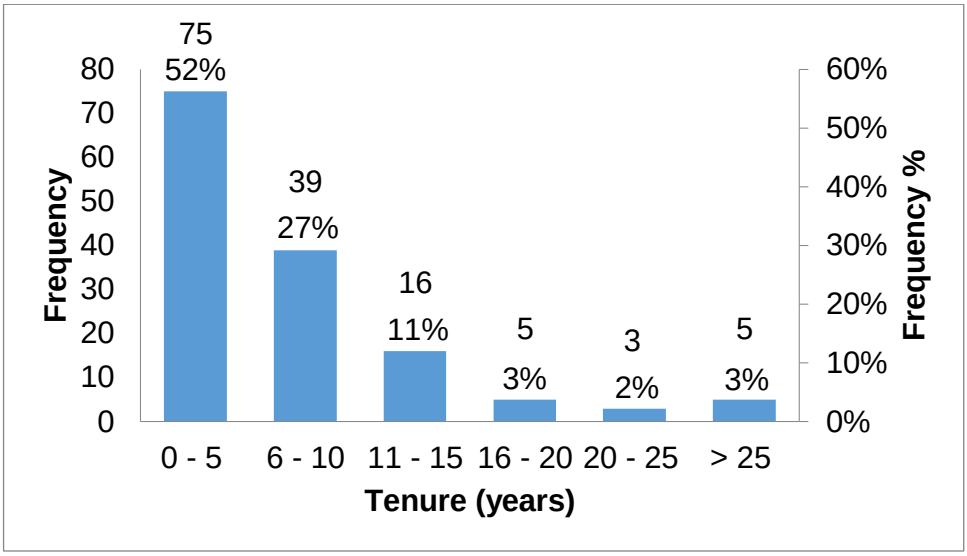


Figure 7 shows the frequencies and percentages of the respondents' tenure at their current organisations. It can be seen that the majority of the respondents' have worked for their organisations for five years or less. Figure 7 shows a trend where the respondents do not tend to remain with organisations for long periods of time.

Figure 7: Tenure in the current organisation



5.4 Discretionary Effort

5.4.1 Validity and Reliability of the Discretionary Effort Scale

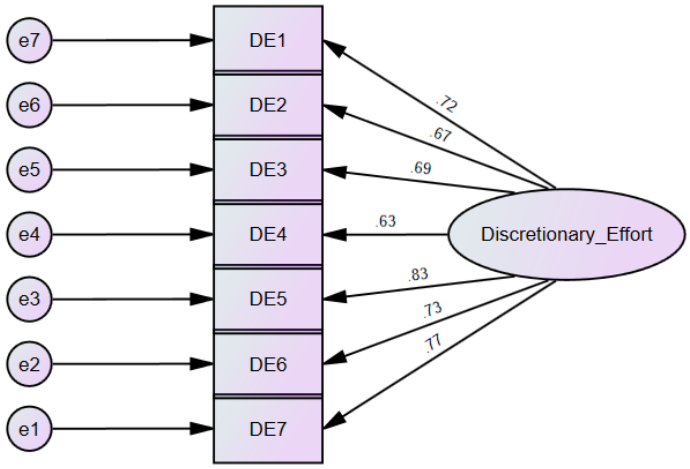
CFA was conducted first in order to test the validity of the construct. Table 8 shows that the KMO index was 0.873, which is meritorious. Since this value is above 0.6, it is acceptable and meets the sampling adequacy criterion for factor analysis. Bartlett's test of sphericity was statistically significant (p=.000); hence factor analysis was appropriate.

Table 8: KMO and Bartlett's test for Discretionary Effort

Kaiser-Meyer-Olkin		0.873
Bartlett's Test of Sphericity	Approx. Chi-Square	483.606
	df	21
	Sig.	0.000

A CFA was conducted on the discretionary effort scale. Figure 8 shows the factor loadings. Since this is a one factor construct, there are no co-variances between factors, which implies that the discriminant validity cannot be investigated.

Figure 8: CFA Path Diagram and Standardised Factor Loadings for the Discretionary Effort Scale.



All of the factor loadings are >0.5; however, the loadings for DE2, DE3 and DE4 are less than 0.7. The AVE is 0.52, implying that convergent validity is acceptable.

Since discriminant validity could not be verified, an EFA was conducted. Table 9 shows the total variance explained by the different components when the principal component analysis was conducted. Component one accounted for 59.057 % of the total variance with an eigenvalue above 1.0. This implies that the common variance shared by seven variables can be accounted for by one factor labelled discretionary effort.

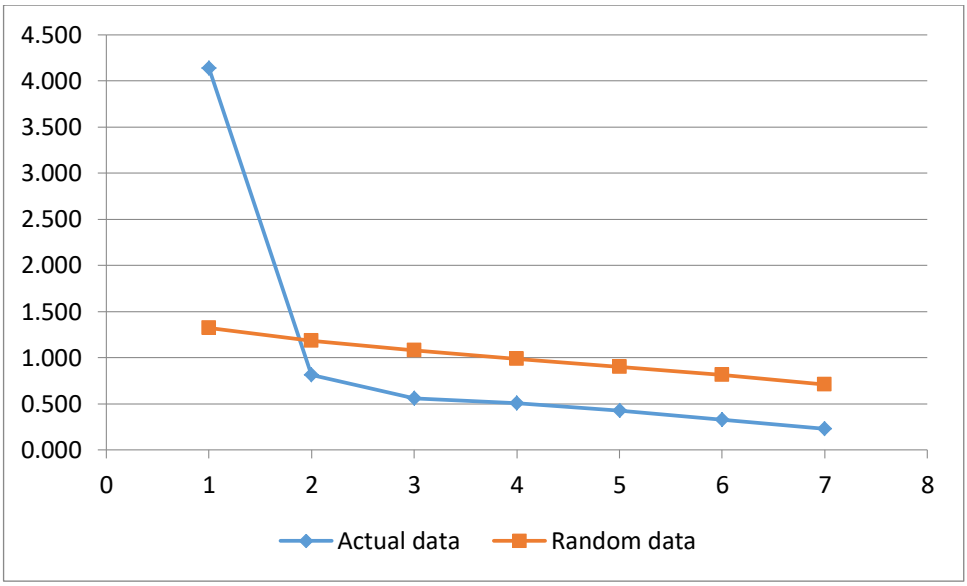
Table 9: Total Variance Explained Discretionary Effort

Component	Initial Eigenvalues Discretionary Effort		
	Total	% of Variance	Cumulative %
1	4.134	59.057	59.057
2	0.813	11.616	70.672
3	0.560	7.998	78.670
4	0.508	7.264	85.934
5	0.426	6.092	92.026
6	0.330	4.721	96.747
7	0.228	3.253	100.000

Based on the scree plot in Figure 9, it can be seen that only one factor has an eigenvalue greater than one. Furthermore, the scree plot was inspected to identify the point of inflection, where the shape of the results curve changes direction and becomes horizontal. Only one point was identified. The parallel analysis also revealed only one point where the eigenvalues of the data exceeded the

corresponding values from the random data set, implying that only one factor should be retained

Figure 9: Scree Plot of Eigenvalues for all Discretionary Effort Factors



This verifies that the items of the scale only load on to one factor. As such, there are no discriminant validity issues. Furthermore, Table 10 shows that all the factor loadings are greater than 0.7. Since all the factor loadings are greater than 0.5, all the items can be included in the scale.

Table 10: EFA Factor Loadings for Discretionary Effort

Item	Statement	Component 1
DE1	When I work, I really exert myself to the fullest, beyond what is expected	0.773
DE2	I finish a job even if it means sacrificing breaks or lunches	0.734
DE3	I do more than is expected of me	0.763
DE4	I voluntarily put in extra hours to achieve a result faster	0.711
DE5	I persist in overcoming obstacles to complete an important task	0.844
DE6	I put in extra effort when I find it necessary.	0.743
DE7	I work harder than expected to help my organisation be successful.	0.804

Table 11 shows the Cronbach alpha for the discretionary effort scale. The Chronbach alpha is greater than 0.7, which indicates that the scale is reliable.

Table 11: Cronbach's Alpha for Discretionary Effort

Cronbach's Alpha	0.880
N of Items	7

Table 12 shows an analysis of the Cronbach alpha to see the effect on the alpha if items of the scale were removed. This analysis indicates that the alpha is not improved upon by deleting any items of the scale, therefore all items were included.

The item-total correlation was also determined as an additional measure of reliability by correlating the individual item score to the sum of all scores. The item-total correlation coefficients were calculated using the corrected Item-Total correlation. All the correlation coefficients were greater than 0.3, which indicates an adequate item-total correlation.

Table 12: Discretionary Effort Item-Total Statistics

Item	Statement	Cronbach's Alpha if Item Deleted	Corrected Item-Total Correlation
DE1	When I work, I really exert myself to the fullest, beyond what is expected.	0.862	0.678
DE2	I finish a job even if it means sacrificing breaks or lunches.	0.867	0.635
DE3	I do more than is expected of me.	0.861	0.676
DE4	I voluntarily put in extra hours to achieve a result faster.	0.870	0.612
DE5	I persist in overcoming obstacles to complete an important task.	0.854	0.757
DE6	I put in extra effort when I find it necessary.	0.868	0.626
DE7	I work harder than expected to help my organisation be successful.	0.857	0.712

5.4.2 Descriptive Statistics for the Construct Discretionary Effort

Discretionary effort as measured by Lloyd's (2008) discretionary effort scale was treated as a total factor item. In Table 13 below, the mean score was 4.29, which indicates a response close to "Agree". The standard deviation of 0.57 indicates that there was not a large amount of variation in the individual responses. With respect to normality, the data was moderately negatively skewed and platykurtic (Bulmer, 1967).

Table 13: Descriptive Statistics for Discretionary Effort

Discretionary Effort	
N	143
Mean	4.29
Median	4.29
Std. Deviation	0.57
Skewness	-0.68
Kurtosis	0.47

5.5 Intention to Turnover

5.5.1 Validity and Reliability of the Intention To Turnover Scale

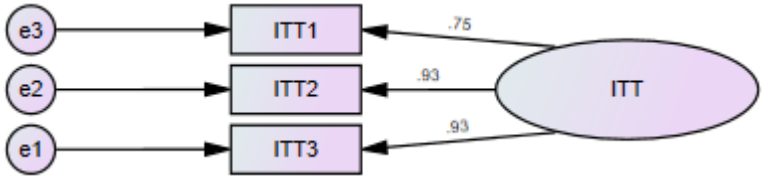
CFA was conducted first in order to test the validity of the construct. Table 14 shows that the KMO index was 0.718, which is middling. Since this value is above 0.6, it is acceptable and meets the sampling adequacy criterion for factor analysis. Bartlett's test of sphericity was statistically significant (p=.000), hence factor analysis was appropriate.

Table 14: KMO and Bartlett's test for Intention To Turnover

Kaiser-Meyer-Olkin		0.718
Bartlett's Test of Sphericity	Approx. Chi-Square	289.602
	df	3
	Sig.	0.000

A CFA was conducted on the intention to turnover scale. Figure 10 shows the factor loadings. Due to the fact that this is a one factor construct, there are no co-variances between factors, which implies that the discriminant validity cannot be investigated.

Figure 10: CFA Path Diagram and Standardised Factor Loadings for the Intention To Turnover Scale.



All of the factor loadings are greater than 0.7. The AVE is 0.76, implying that convergent validity is acceptable.

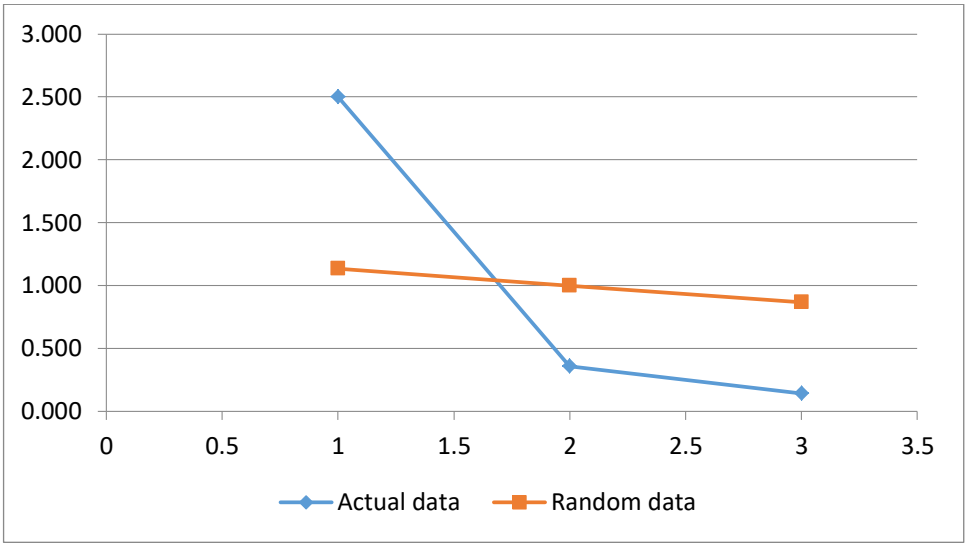
Since discriminant validity could not be verified, an EFA was conducted. Table 15 shows the total variance explained by the different components when the principal component analysis was conducted. Component one accounted for 83.364 % of the total variance with an eigenvalue above 1.0. This implies that the common variance shared by the three variables can be accounted for by one factor labelled intention to turnover.

Table 15: Total Variance Explained Intention To Turnover

Component	Initial Eigenvalues Intention to Turnover		
	Total	% of Variance	Cumulative %
1	2.501	83.364	83.364
2	0.357	11.912	95.275
3	0.142	4.725	100.000

Based on the scree plot in Figure 11, it can be seen that only one factor has an eigenvalue greater than one. Furthermore, the scree plot was inspected to identify the point of inflection, where the shape of the results curve changes direction and becomes horizontal. Only one point was identified. The parallel analysis also revealed only one point where the eigenvalues of the data exceeded the corresponding values from the random data set, implying that only one factor should be retained.

Figure 11: Scree Plot of Eigenvalues for all Intention to Turnover Factors



This verifies that the items of the scale only load on to one factor. As such, there are no discriminant validity issues. Furthermore, Table 16 shows that all the factor loadings are greater than 0.7. Since all the factor loadings are greater than 0.5, all the items can be included in the scale.

Table 16: EFA Factor Loadings for Intention to Turnover

Item	Statement	Component 1
ITT1	I frequently think of quitting my job.	0.866
ITT2	I am planning to search for a new job during the next 12 months.	0.936
ITT3	If I have my own way, I will be working for a new organisation one year from now.	0.935

Table 17 shows the Cronbach alpha for the intention to turnover scale. The Chronbach alpha is greater than 0.7, which indicates that the scale is reliable.

Table 17: Cronbach's Alpha for Intention to Turnover

Cronbach's Alpha	0.900
N of Items	3

Table 18 shows an analysis of the Cronbach's alpha to see the effect on the alpha if items of the scale were removed. This analysis indicates that the alpha would be marginally improved upon from 0.900 to 0.923 if item ITT1 were removed. Since

this scale only has three items and that the original alpha was already acceptable at 0.900, item ITT1 was not removed.

The item-total correlation was also determined as an additional measure of reliability by correlating the individual item score to the sum of all scores. The item-total correlation coefficients were calculated using the corrected item-total Correlation. All the correlation coefficients were greater than 0.3, which indicates an adequate item-total correlation.

Table 18: Intention To Turnover Item-Total Statistics

Item	Statement	Cronbach's Alpha if Item Deleted	Corrected Item-Total Correlation
ITT1	I frequently think of quitting my job.	0.923	0.720
ITT2	I am planning to search for a new job during the next 12 months.	0.815	0.849
ITT3	If I have my own way, I will be working for a new organisation one year from now.	0.818	0.847

5.5.2 Descriptive Statistics for the Construct Intention To Turnover

Intention to turnover as measured by Colarelli's (1984) intention to turnover scale was treated as a total factor item. In Table 19 below, the mean score was 3.32, which indicates a response close to "Neutral". The standard deviation of 1.15; however, indicates that there was a large amount of variation in the individual responses. With respect to normality, the data was fairly symmetrical and platykurtic (Bulmer, 1967).

Table 19: Descriptive Statistics for Intention to Turnover

Intention to Turnover	
N	143
Mean	3.32
Median	3.33
Std. Deviation	1.15
Skewness	-0.22
Kurtosis	-0.95

5.6 Employee Engagement

5.6.1 Validity and Reliability of the Employee Engagement Scale

CFA was conducted first in order to test the validity of the construct. Table 20 shows that the KMO index was 0.928, which is marvellous. Since this value is above 0.6, it is acceptable and meets the sampling adequacy criterion for factor analysis. Bartlett's test of sphericity was statistically significant (p=.000), hence factor analysis was appropriate.

Table 20: KMO and Bartlett's test for Employee Engagement

Kaiser-Meyer-Olkin		0.928
Bartlett's Test of Sphericity	Approx. Chi-Square	2153.691
	df	153
	Sig.	0.000

A CFA was conducted on the employee engagement scale. Figure 12 shows the factor loadings and co-variances between the factors. All of the factor loadings are greater than 0.7 except for PE2, which is 0.68. This is quite close to the 0.7 threshold and should not affect the convergent validity. The co-variance between Physical Engagement (PEn) and Cognitive Engagement (CEn) is above the threshold of 0.7 and could pose an issue with the discriminant validity. The key parameters to confirm validity are shown in Table 21.

Figure 12: CFA Path Diagram and Standardised Factor Loadings for the Employee Engagement Scale.

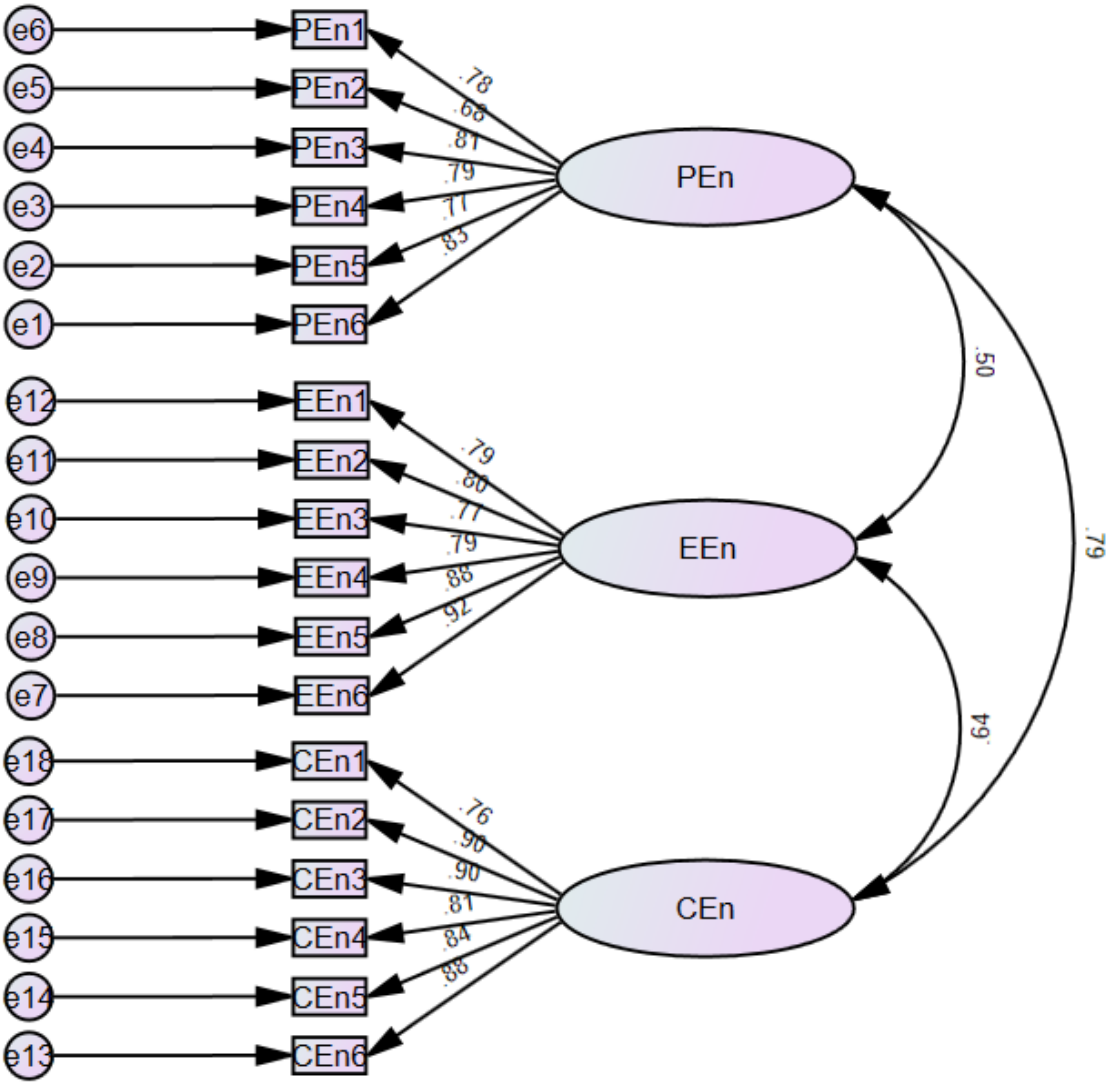


Table 21: CFA Validity Parameters

	AVE	MSV	EEn	PEn	CEn
EEn	0.684	0.410	**0.827***		
PEn	0.605	0.623	0.501	**0.778***	
CEn	0.722	0.623	0.640	0.789	**0.850***
*The square root of AVE					
Inter-construct correlations					
Violation of Discriminant Validity criteria					

Since MSV for each factor is greater than 0.5, convergent validity is verified. For PEn, the MSV is greater than AVE, and this violates the discriminant validity

criterion. Furthermore, the square root of AVE for PEn is less than the correlation for PEn and CEn. This implies that there are discriminant validity issues.

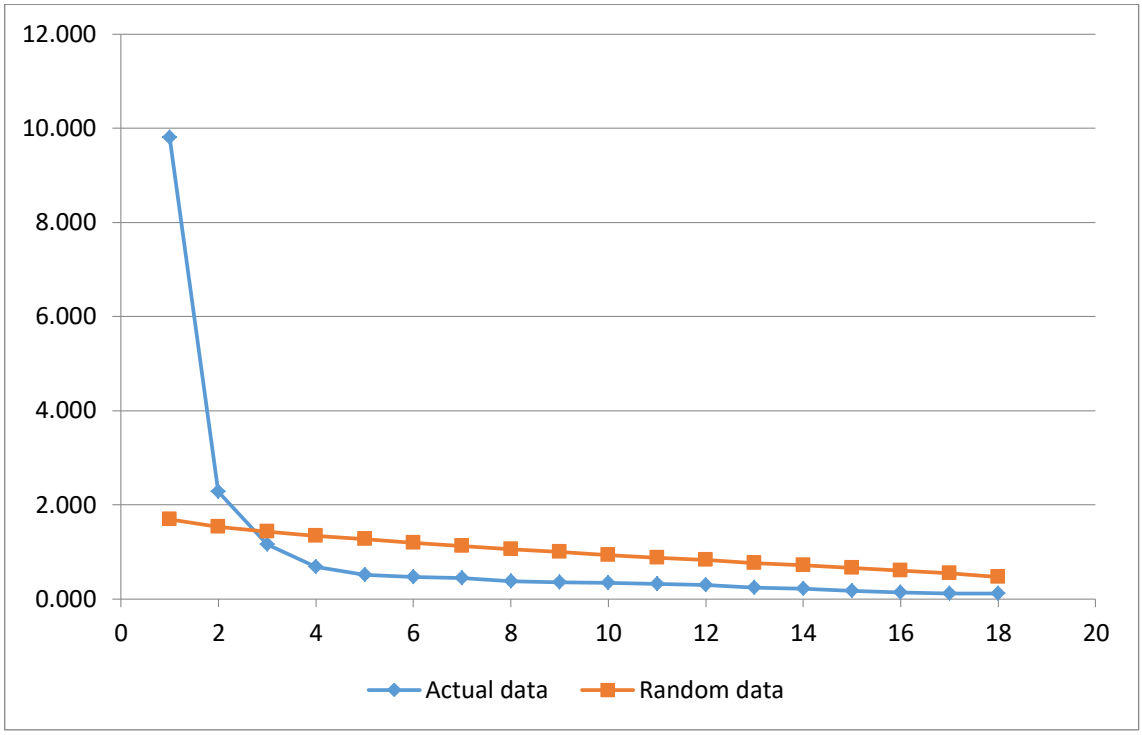
Due to this, an EFA was conducted. Table 15 shows the total variance explained by the different components when the principal component analysis was conducted. Components one to three accounted for 73.553 % of the total variance with an eigenvalue above 1.0.

Table 22: Total Variance Explained Employee Engagement

Component	Initial Eigenvalues Employee Engagement		
	Total	% of Variance	Cumulative %
1	9.803	54.462	54.462
2	2.275	12.641	67.103
3	1.161	6.450	73.553
4	0.679	3.775	77.327
5	0.506	2.810	80.137
6	0.462	2.567	82.704
7	0.441	2.451	85.154
8	0.379	2.105	87.259
9	0.348	1.936	89.195
10	0.337	1.870	91.065
11	0.322	1.791	92.856
12	0.293	1.627	94.483
13	0.244	1.354	95.837
14	0.214	1.188	97.025
15	0.171	0.948	97.973
16	0.137	0.759	98.732
17	0.118	0.656	99.387
18	0.110	0.613	100.000

Based on the scree plot in Figure 13, it can be seen that three factors have eigenvalues greater than one. Furthermore, the scree plot was inspected to identify the point of inflection, where the shape of the results curve changes direction and becomes horizontal. Three points were identified to be above the inflection point. The parallel analysis, however, revealed only two points where the eigenvalues of the data exceeded the corresponding values from the random data set, however the third point of the data coincided with that of the third point of the random data set.

Figure 13: Scree Plot of Eigenvalues for all Employee Engagement Factors



Due to this discrepancy with regards to the number of factors to be extracted, the rotated component matrices of a three component extraction was compared to that of a two component extraction (Pallant, 2007). This is shown in Table 23.

Table 23: Comparison of a Three Component Extraction Matrix and a Two Component Extraction Matrix for Employee Engagement.

	3 Component				2 Component	
Item	1	2	3	Item	1	2
PEn1			0.765	PEn1	0.750	
PEn2			0.790	PEn2	0.672	
PEn3	0.329		0.786	PEn3	0.800	
PEn4	0.504		0.642	PEn4	0.809	
PEn5	0.522		0.560	PEn5	0.754	
PEn6			0.766	PEn6	0.755	
EEn1		0.760		EEn1	0.323	0.758
EEn2		0.792		EEn2		0.785
EEn3	0.320	0.741		EEn3		0.772
EEn4	0.393	0.710		EEn4	0.377	0.750
EEn5		0.892		EEn5		0.893
EEn6		0.895		EEn6		0.913
CEn1	0.662	0.373		CEn1	0.596	0.471
CEn2	0.775		0.350	CEn2	0.753	0.410
CEn3	0.760	0.371	0.315	CEn3	0.713	0.482
CEn4	0.686	0.329	0.350	CEn4	0.693	0.423
CEn5	0.824			CEn5	0.691	0.386
CEn6	0.830		0.321	CEn6	0.773	0.327

In order to simplify this comparison, factor loadings below 0.5 were removed (Hair et al., 2014). This is shown in Table 24.

Table 24: Comparison of a Three Component Extraction Matrix and a Two Component Extraction Matrix for Employee Engagement with Factor Loadings below 0.5 removed.

	3 Component				2 Component	
Item	1	2	3	Item	1	2
PEn1			0.765	PEn1	0.750	
PEn2			0.790	PEn2	0.672	
PEn3			0.786	PEn3	0.800	
PEn4	0.504		0.642	PEn4	0.809	
PEn5	0.522		0.560	PEn5	0.754	
PEn6			0.766	PEn6	0.755	
EEn1		0.760		EEn1		0.758
EEn2		0.792		EEn2		0.785
EEn3		0.741		EEn3		0.772
EEn4		0.710		EEn4		0.750
EEn5		0.892		EEn5		0.893
EEn6		0.895		EEn6		0.913
CEn1	0.662			CEn1	0.596	
CEn2	0.775			CEn2	0.753	
CEn3	0.760			CEn3	0.713	
CEn4	0.686			CEn4	0.693	
CEn5	0.824			CEn5	0.691	
CEn6	0.830			CEn6	0.773	

Based on Table 24, there are no cross loadings on the two factor extraction; however, it suggests that physical engagement and cognitive engagement should be grouped under one factor. This does not make practical sense, as these are two very distinct and different constructs. If PEn4 and PEn5 are removed, from the three factor extraction, then there are no significant cross factor loadings between PEn and CEn and a three factor extraction can be retained. The EFA was conducted without PEn4 and PEn5 and yielded the rotated component matrix shown in Table 25.

Table 25: Rotated Component Loading Matrix for Employee Engagement

	Component		
	1	2	3
PEn1		0.313	0.763
PEn2			0.820
PEn3		0.362	0.789
PEn6		0.322	0.754
EEn1	0.753		
EEn2	0.788		
EEn3	0.734	0.333	
EEn4	0.705	0.407	
EEn5	0.894		
EEn6	0.896		
CEn1	0.351	0.682	
CEn2		0.793	0.335
CEn3	0.357	0.776	
CEn4	0.316	0.703	0.334
CEn5		0.836	
CEn6		0.847	0.307

The differences between the cross loadings are greater than 0.2, which would not result in discriminant validity issues. A factor correlation matrix cannot be produced when using a Varimax Rotation, as the correlations between factors are set to zero (UCLA: Statistical Consulting Group., n.d.).

Table 26 shows the Cronbach alpha for the physical engagement scale. The Chronbach alpha is greater than 0.7, which indicates that the scale is reliable.

Table 26: Cronbach's Alpha for Physical Engagement

Cronbach's Alpha	0.877
N of Items	4

Table 27 shows an analysis of the Cronbach's alpha to see the effect on the alpha if items of the scale were removed. This analysis indicates that the alpha is not improved upon by deleting any items of the scale, therefore all items were included.

The item-total correlation was also determined as an additional measure of reliability by correlating the individual item score to the sum of all scores. The item-total correlation coefficients were calculated using the corrected Item-Total

Correlation. All the correlation coefficients were greater than 0.3, which indicates an adequate item-total correlation.

Table 27: Physical Engagement Item-Total Statistics

Item	Statement	Cronbach's Alpha if Item Deleted	Corrected Item-Total Correlation
PEn1	I work with intensity on my job	0.842	0.735
PEn2	I exert my full effort to my job.	0.861	0.689
PEn3	I devote a lot of energy to my job.	0.828	0.769
PEn6	I exert a lot of energy on my job.	0.836	0.749

Table 28 shows the Cronbach alpha for the emotional engagement scale. The Chronbach alpha is greater than 0.7, which indicates that the scale is reliable.

Table 28: Cronbach's Alpha for Emotional Engagement

Cronbach's Alpha	0.927
Cronbach's Alpha Based on Standardized Items	0.927
N of Items	6

Table 29 shows an analysis of the Cronbach's alpha to see the effect on the alpha if items of the scale were removed. This analysis indicates that the alpha is not improved upon by deleting any items of the scale, therefore all items were included.

The item-total correlation was also determined as an additional measure of reliability by correlating the individual item score to the sum of all scores. The item-total correlation coefficients were calculated using the corrected Item-Total Correlation. All the correlation coefficients were greater than 0.3, which indicates an adequate item-total correlation.

Table 29: Emotional Engagement Item-Total Statistics

Item	Statement	Cronbach's Alpha if Item Deleted	Corrected Item-Total Correlation
EEn1	I am enthusiastic in my job.	0.916	0.766
EEn2	I feel energetic at my job.	0.917	0.765
EEn3	I am interested in my job.	0.919	0.748
EEn4	I am proud of my job.	0.918	0.753
EEn5	I feel positive about my job.	0.908	0.830
EEn6	I am excited about my job.	0.902	0.875

Table 30 shows the Cronbach alpha for the emotional engagement scale. The Chronbach alpha is greater than 0.7, which indicates that the scale is reliable.

Table 30: Cronbach's Alpha for Cognitive Engagement

Cronbach's Alpha	0.936
N of Items	6

Table 31 shows an analysis of the Cronbach's alpha to see the effect on the alpha if items of the scale were removed. This analysis indicates that the alpha is not improved upon by deleting any items of the scale, therefore all items were included.

The item-total correlation was also determined as an additional measure of reliability by correlating the individual item score to the sum of all scores. The item-total correlation coefficients were calculated using the corrected item-total correlation. All the correlation coefficients were greater than 0.3, which indicates an adequate item-total correlation.

Table 31: Cognitive Engagement Item-Total Statistics

Item	Statement	Cronbach's Alpha if Item Deleted	Corrected Item-Total Correlation
CEn1	I am enthusiastic in my job.	0.936	0.731
CEn2	I feel energetic at my job.	0.917	0.868
CEn3	I am interested in my job.	0.920	0.852
CEn4	I am proud of my job.	0.930	0.769
CEn5	I feel positive about my job.	0.923	0.820
CEn6	I am excited about my job.	0.919	0.850

5.6.2 Descriptive Statistics for the Construct Employee Engagement

Employee engagement, as measured by the job engagement scale of Rich et al. (2010), was treated as both a total factor item and as a separate factor item. In Table 32 below, the mean scores indicated responses close to "Agree". The standard deviations indicated that there was not a large amount of variation in the individual responses. With respect to normality, the data was moderately negatively skewed and platykurtic (Bulmer, 1967).

Table 32: Descriptive Statistics for Employee Engagement

	TotalPEn	TotalEEn	TotalCEn	TotalEE
N	143	143	143	143
Mean	4.38	4.00	4.09	4.13
Median	4.50	4.00	4.00	4.13
Std. Deviation	0.56	0.73	0.67	0.57
Skewness	-0.93	-0.92	-0.61	-0.98
Kurtosis	1.42	1.38	0.67	1.96

5.7 Perceived Justice

5.7.1 Validity and Reliability of the Perceived Justice Scale

CFA was conducted first in order to test the validity of the construct. Table 33 shows that the KMO index was 0.929, which is marvellous. Since this value is above 0.6, it is acceptable and meets the sampling adequacy criterion for factor analysis. Bartlett's test of sphericity was statistically significant (p=.000), hence factor analysis was appropriate.

Table 33: KMO and Bartlett's test for Perceived Performance Appraisal Justice

Kaiser-Meyer-Olkin		0.929
Bartlett's Test of Sphericity	Approx. Chi-Square	2646.801
	df	190
	Sig.	0.000

A CFA was conducted on the perceived performance appraisal justice scale. Figure 14 shows the factor loadings and co-variances between the factors. Most of the factor loadings are greater than 0.7 except for PJ1, PJ2, PJ6 and IJ1. This could affect the convergent validity. The co-variance between Procedural Justice (PJ) and Distributive Justice (DJ) is 0.84, and the co-variance between PJ and Informational Justice (IJ) is 0.74. These are above the threshold of 0.7 and could

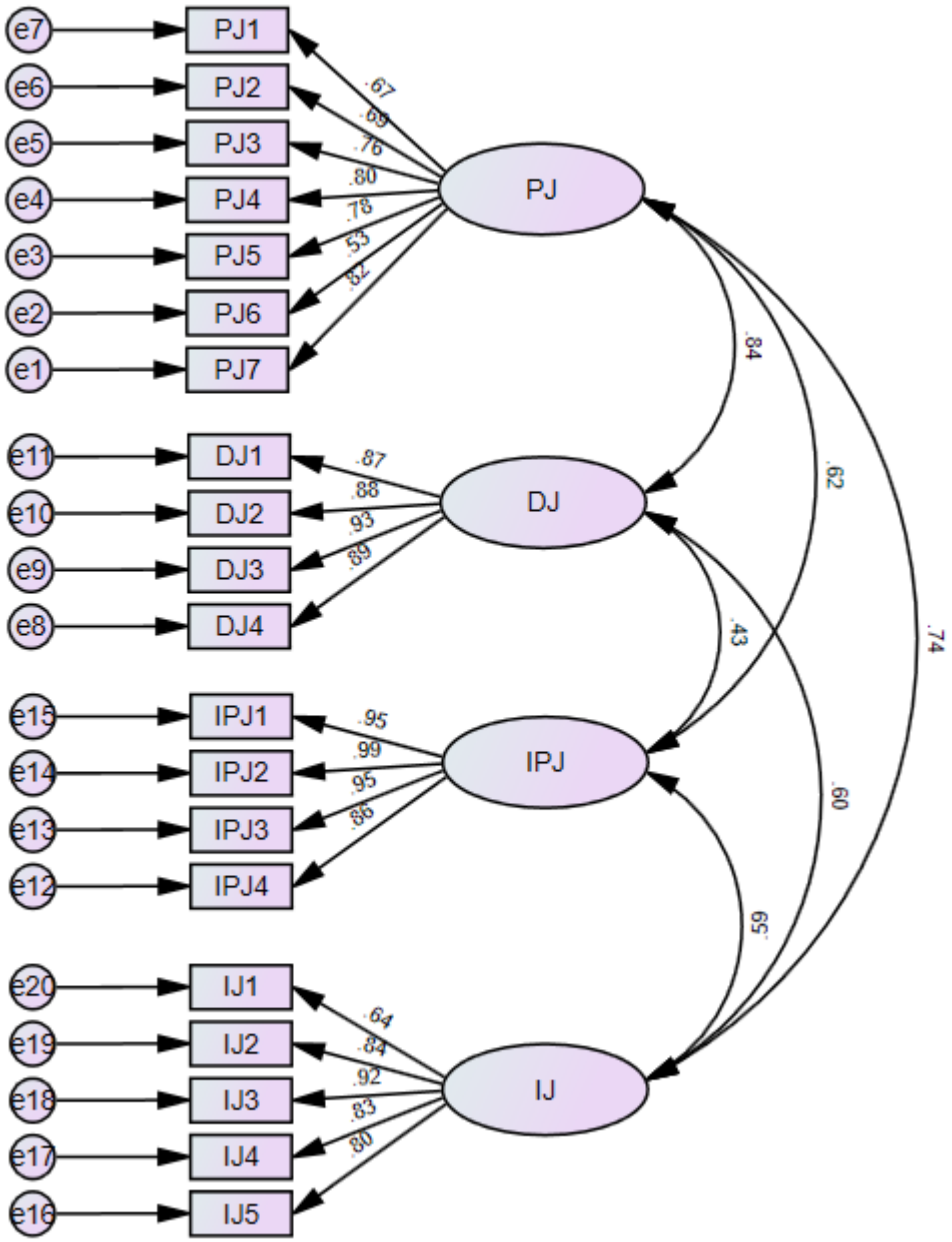
pose an issue with the discriminant validity. The key parameters to confirm validity are shown in Table 34.

Table 34: Perceived Justice CFA Validity Parameters

	AVE	MSV	IPJ	PJ	DJ	IJ
IPJ	0.885	0.382	**0.941***			
PJ	0.528	0.707	0.618	**0.726***		
DJ	0.795	0.707	0.429	0.841	**0.892***	
IJ	0.659	0.554	0.586	0.744	0.601	**0.812***
***The square root of AVE**						
Inter-construct correlations						
Violation of Discriminant Validity criteria						

Since MSV for each factor is greater than 0.5, convergent validity is verified. For PJ, the MSV is greater than AVE, and this violates the discriminant validity criterion. Furthermore, the square root of AVE for PJ is less than the correlation for PJ and DJ. This implies that there are discriminant validity issues.

Figure 14: CFA Path Diagram and Standardised Factor Loadings for the Perceived Justice Scale.



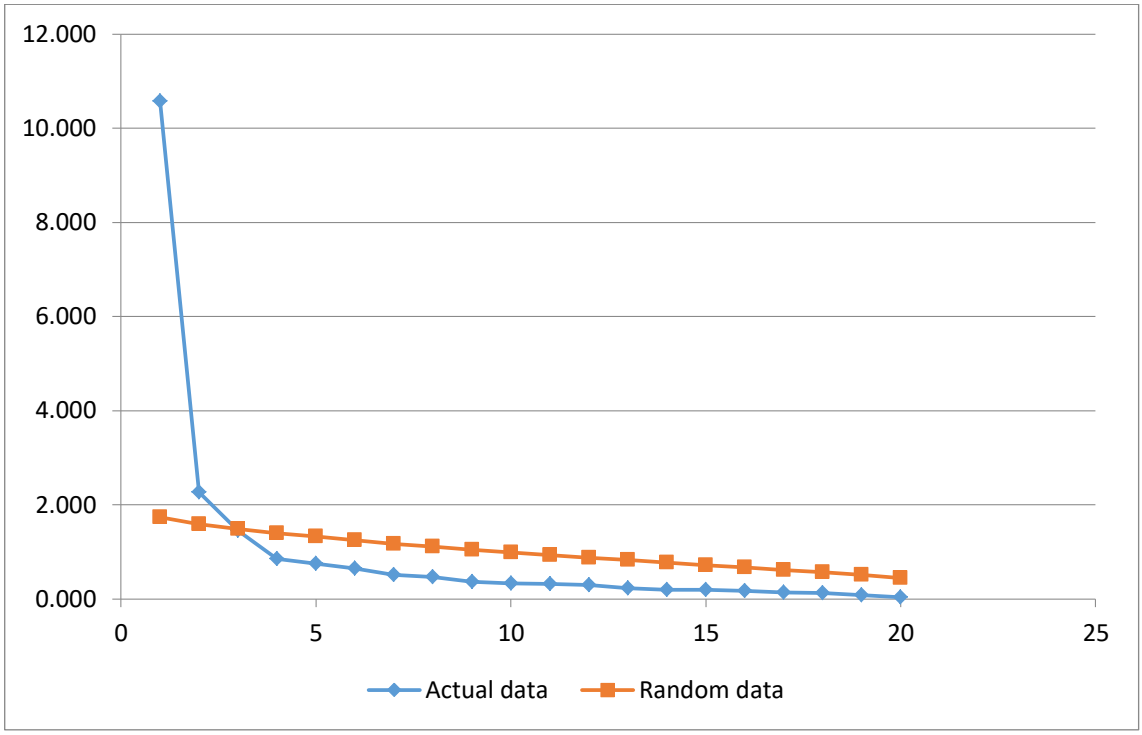
Due to this, an EFA was conducted. Table 35 shows the total variance explained by the different components when the principal component analysis was conducted. Components one to three accounted for 71.445 % of the total variance with an eigenvalue above 1.0.

Table 35: Total Variance Explained Perceived Justice

Component	Initial Eigenvalues Perceived Justice		
	Total	% of Variance	Cumulative %
1	10.572	52.860	52.860
2	2.270	11.351	64.211
3	1.447	7.233	71.445
4	0.851	4.255	75.700
5	0.752	3.762	79.461
6	0.652	3.261	82.722
7	0.510	2.549	85.271
8	0.466	2.331	87.602
9	0.367	1.835	89.437
10	0.327	1.636	91.073
11	0.313	1.565	92.638
12	0.296	1.479	94.117
13	0.233	1.165	95.282
14	0.199	0.993	96.274
15	0.194	0.969	97.244
16	0.173	0.865	98.109
17	0.138	0.691	98.800
18	0.124	0.622	99.422
19	0.081	0.407	99.829
20	0.034	0.171	100.000

Based on the scree plot in Figure 15, it can be seen that three factors have eigenvalues greater than one. Furthermore, the scree plot was inspected to identify the point of inflection, where the shape of the results curve changes direction and becomes horizontal. Three points were identified to be above the inflection point. The parallel analysis, however, revealed only two points where the eigenvalues of the data exceeded the corresponding values from the random data set; however, the third point coincided with the value of the random data set. Due to this, three factors were extracted.

Figure 15: Scree Plot of Eigenvalues for all Perceived Justice Factors



From Table 36, it can be seen that PJ1, PJ6 and IJ1 are problematic with regards to cross-loadings, and these items were removed. Loadings less than 0.5 were also removed. The final factor structure is shown in Table 37.

Table 36: Rotated Component Loading Matrix for Perceived Justice

Item	Statement	Component		
		1	2	3
PJ1	I am able to express my views and feelings during the performance appraisal meeting	0.435	0.502	0.315
PJ2	I have influence over the outcomes of the performance appraisal procedures	0.650	0.327	
PJ3	The procedures followed during performance appraisal process have been applied consistently in my organization	0.592		0.360
PJ4	The procedures followed during the performance appraisal process are free of bias	0.690		0.355
PJ5	The performance appraisal procedures are based on accurate information	0.689		0.361
PJ6	I can appeal against the outcomes arrived at by the performance appraisal procedures	0.463	0.377	
PJ7	The performance appraisal meetings upheld ethical and moral standards	0.632	0.424	
DJ1	The outcome of the performance appraisal process reflects the effort I have put into my work	0.830		
DJ2	The outcome of the performance appraisal process is appropriate for the work I completed	0.840		
DJ3	The outcome of the performance appraisal process reflects what I have contributed to the organization	0.866		
DJ4	The outcome of the performance appraisal process is justified, given my performance	0.827		
IPJ1	During the performance appraisal meeting, my supervisor treated me in a polite manner		0.902	
IPJ2	My supervisor treated me with dignity during the performance appraisal meeting		0.912	
IPJ3	My supervisor treated me with respect during the performance appraisal meeting		0.910	
IPJ4	My supervisor refrained from improper remarks or comments		0.840	
IJ1	My supervisor was candid in (his/her) communications with me	0.372	0.441	0.455
IJ2	My supervisor explained the procedures of the performance appraisal process thoroughly			0.826
IJ3	My supervisor gave reasonable explanations regarding the procedures			0.829
IJ4	My supervisor communicated details regarding the performance appraisal process in a timely manner			0.785
IJ5	My supervisor tailored (his/her) communications to my specific needs	0.322		0.771

Table 37: Rotated Component Loading Matrix for Perceived Justice with problematic items removed and with Factor Loadings below .5 removed.

Item	Statement	Component		
		1	2	3
PJ2	I have influence over the outcomes of the performance appraisal procedures	0.650		
PJ3	The procedures followed during performance appraisal process have been applied consistently in my organization	0.592		
PJ4	The procedures followed during the performance appraisal process are free of bias	0.690		
PJ5	The performance appraisal procedures are based on accurate information	0.689		
PJ7	The performance appraisal meetings upheld ethical and moral standards	0.632		
DJ1	The outcome of the performance appraisal process reflects the effort I have put into my work	0.830		
DJ2	The outcome of the performance appraisal process is appropriate for the work I completed	0.840		
DJ3	The outcome of the performance appraisal process reflects what I have contributed to the organization	0.866		
DJ4	The outcome of the performance appraisal process is justified, given my performance	0.827		
IPJ1	During the performance appraisal meeting, my supervisor treated me in a polite manner		0.902	
IPJ2	My supervisor treated me with dignity during the performance appraisal meeting		0.912	
IPJ3	My supervisor treated me with respect during the performance appraisal meeting		0.910	
IPJ4	My supervisor refrained from improper remarks or comments		0.840	
IJ2	My supervisor explained the procedures of the performance appraisal process thoroughly			0.826
IJ3	My supervisor gave reasonable explanations regarding the procedures			0.829
IJ4	My supervisor communicated details regarding the performance appraisal process in a timely manner			0.785
IJ5	My supervisor tailored (his/her) communications to my specific needs			0.771

Based on this, the original factors of procedural justice and distributive justice should be combined into a single factor. This is plausible as if a procedure is thought to be fair, then the outcomes from that procedure should be fair (Folger,

1987). As a result this new factor was grouped under procedural justice. The other two factor names were retained.

Table 38 shows the Cronbach alpha for the procedural justice scale. The Chronbach alpha is greater than 0.7, which indicates that the scale is reliable.

Table 38: Cronbach's Alpha for Procedural Justice

Cronbach's Alpha	0.936
N of Items	9

Table 39 shows an analysis of the Cronbach's alpha to see the effect on the alpha if items of the scale were removed. This analysis indicates that the alpha is not improved upon by deleting any items of the scale, therefore all items were included.

The item-total correlation was also determined as an additional measure of reliability by correlating the individual item score to the sum of all scores. The item-total correlation coefficients were calculated using the corrected item-total correlation. All the correlation coefficients were greater than 0.3, which indicates an adequate item-total correlation

Table 39: Procedural Justice Item-Total Statistics

Item	Statement	Cronbach's Alpha if Item Deleted	Corrected Item-Total Correlation
PJ2	I have influence over the outcomes of the performance appraisal procedures	0.935	0.641
PJ3	The procedures followed during performance appraisal process have been applied consistently in my organization	0.932	0.696
PJ4	The procedures followed during the performance appraisal process are free of bias	0.929	0.756
PJ5	The performance appraisal procedures are based on accurate information	0.929	0.747
PJ7	The performance appraisal meetings upheld ethical and moral standards	0.929	0.751
DJ1	The outcome of the performance appraisal process reflects the effort I have put into my work	0.927	0.776
DJ2	The outcome of the performance appraisal process is appropriate for the work I completed	0.925	0.815
DJ3	The outcome of the performance appraisal process reflects what I have contributed to the organization	0.924	0.844
DJ4	The outcome of the performance appraisal process is justified, given my performance	0.925	0.819

Table 40 shows the Cronbach alpha for the interpersonal justice scale. The Chronbach alpha is greater than 0.7, which indicates that the scale is reliable.

Table 40: Cronbach's Alpha for Interpersonal Justice

Cronbach's Alpha	0.967
N of Items	4

Table 41 shows an analysis of the Cronbach's alpha to see the effect on the alpha if items of the scale were removed. This analysis indicates that the alpha is improved upon by deleting IPJ4. IPJ4 was therefore deleted.

The item-total correlation was also determined as an additional measure of reliability by correlating the individual item score to the sum of all scores. The item-total correlation coefficients were calculated using the corrected item-total correlation. All the correlation coefficients were greater than 0.3, which indicates an adequate item-total correlation.

Table 41: Interpersonal Justice Item-Total Statistics

Item	Statement	Cronbach's Alpha if Item Deleted	Corrected Item-Total Correlation
IPJ1	During the performance appraisal meeting, my supervisor treated me in a polite manner	0.956	0.921
IPJ2	My supervisor treated me with dignity during the performance appraisal meeting	0.945	0.960
IPJ3	My supervisor treated me with respect during the performance appraisal meeting	0.951	0.940
IPJ4	My supervisor refrained from improper remarks or comments	0.975	0.856

Table 42 shows the Cronbach alpha for the informational justice scale. The Chronbach alpha is greater than 0.7, which indicates that the scale is reliable.

Table 42: Cronbach's Alpha for Informational Justice

Cronbach's Alpha	0.912
N of Items	4

Table 43 shows an analysis of the Cronbach's alpha to see the effect on the alpha if items of the scale were removed. This analysis indicates that the alpha is not improved upon by deleting any items of the scale, therefore all items were included.

The item-total correlation was also determined as an additional measure of reliability by correlating the individual item score to the sum of all scores. The item-total correlation coefficients were calculated using the corrected item-total correlation. All the correlation coefficients were greater than 0.3, which indicates an adequate item-total correlation.

Table 43: Informational Justice Item-Total Statistics

Item	Statement	Cronbach's Alpha if Item Deleted	Corrected Item-Total Correlation
IJ2	My supervisor explained the procedures of the performance appraisal process thoroughly	0.891	0.785
IJ3	My supervisor gave reasonable explanations regarding the procedures	0.863	0.865
IJ4	My supervisor communicated details regarding the performance appraisal process in a timely manner	0.890	0.790
IJ5	My supervisor tailored (his/her) communications to my specific needs	0.899	0.763

5.7.2 Descriptive Statistics for the Construct Perceived Justice

Perceived performance appraisal justice as measured by the perceived justice scale of Colquitt (2001) was treated as a separate factor items. In Table 44 below, the mean scores indicated responses close to "Neutral" for procedural justice and informational justice, while the scores for interpersonal justice were close to “Agree”. The standard deviations indicated that there was not a reasonable amount of variation in the individual responses. With respect to normality, the data was moderately negatively skewed and platykurtic (Bulmer, 1967). With regards to skewness, the distributions are fairly symmetrical for procedural justice and informational justice, while the distribution for interpersonal justice has an excessive negative skewness. All the distributions are platykurtic.

Table 44: Descriptive Statistics for Perceived Justice

	TotalPJ	TotalIPJ	TotalIJ	TotalPPAJ
N	143	143	143	143
Mean	3.05	4.07	3.40	3.33
Median	3.11	4.00	3.50	3.44
Std. Deviation	0.92	0.92	0.99	0.81
Skewness	-0.09	-1.23	-0.46	-0.24
Kurtosis	-0.73	1.54	-0.51	-0.55

5.8 Multiple Regression Analysis

In order to test the hypotheses, multiple regression analysis was conducted, as there is no separate test for multiple correlation. Similar studies have also made

use of multiple regression analysis to test hypotheses (V. Gupta & Kumar, 2013; Jawahar, 2007; Saks, 2006; Shuck et al., 2011). Correlation coefficients were calculated as part of the multiple regression analysis carried out on IBM SPSS (Version 25). The assumptions for regression analysis were assessed. These assumptions were met. The results of the various regression analysis are presented below, based on the respective hypothesis that was tested.

5.8.1 Hypothesis 1

Research Question 1: Is there a significant relationship between the perceived fairness/justice of performance appraisals and employee engagement?

The null hypothesis was that "no significant relationship exists between the perceived fairness/justice of performance appraisals and employee engagement" ($H_0$1). The alternate hypothesis ($H_1$1) was that "a significant relationship exists between the perceived fairness/justice of performance appraisals and employee engagement". A multiple regression analysis was conducted with the factors of perceived performance appraisal justice and the total item of employee engagement.

Table 45 shows that no variables were removed from the analysis.

Table 45: Variables Entered/Removed for Hypothesis 1

Model	Variables Entered	Variables Removed	Method
1	TotalIJ, TotalIPJ, TotalPJ[b]		Enter
a. Dependent Variable: TotalEE			
b. All requested variables entered.			

Table 46: Model Summary for Hypothesis 1

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	.422[a]	0.178	0.16	0.52361	0.178	10.02	3	139	0
a. Predictors: (Constant), TotalIJ, TotalIPJ, TotalPJ									

The multiple correlation coefficient in Table 46 is 0.422, which indicates a medium/moderate correlation. The adjusted coefficient of determination is 0.16 and

indicates that the perceived performance appraisal justice factors can explain 16.0% of the variance in employee engagement.

Table 47: ANOVA for the regression analysis for Hypothesis 1

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	8.241	3	2.747	10.02	.000[b]
	Residual	38.109	139	0.274		
	Total	46.351	142			
a. Dependent Variable: TotalEE						
b. Predictors: (Constant), TotalIJ, TotalIPJ, TotalPJ						

The ANOVA table (Table 47) shows that the p value (sig) is less than 0.05, which indicates that the model is a good fit for the data.

Table 48: Coefficients Table for the regression analysis for Hypothesis 1

Model		Unstandardized Coefficients		Standardised Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	3.234	0.209		15.498	0	2.821	3.646
	TotalPJ	0.211	0.064	0.34	3.298	0.001	0.085	0.338
	TotalIPJ	0.016	0.058	0.026	0.276	0.783	-0.099	0.132
	TotalIJ	0.055	0.061	0.095	0.905	0.367	-0.065	0.174
a. Dependent Variable: TotalEE								

Based on the p values (sig) from Table 48, only procedural justice is a good predictor of employee engagement.

The results of this analysis provides sufficient statistical evidence that the null hypothesis can be rejected in favour of the alternative hypothesis.

5.8.2 Hypothesis 2

Research Question 2: Is there a significant relationship between the perceived fairness/justice of performance appraisals and discretionary effort?

The null hypothesis ($H_0$2) was that “no significant relationship exists between the perceived fairness/justice of performance appraisals and discretionary effort”. The alternative hypothesis ($H_1$2) was that “a significant relationship exists between the perceived fairness/justice of performance appraisals and discretionary effort.”

Table 49 shows that no variables were removed from the analysis.

Table 49: Variables Entered/Removed for Hypothesis 2

Model	Variables Entered	Variables Removed	Method
1	TotalIJ, TotalIPJ, TotalPJ[b]		Enter
a. Dependent Variable: TotalDE			
b. All requested variables entered.			

Table 50: Model Summary for Hypothesis 2

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	.247[a]	0.061	0.041	0.56004	0.061	3.006	3	139	0.033
a. Predictors: (Constant), TotalIJ, TotalIPJ, TotalPJ									

The multiple correlation coefficient (R) in Table 50 is 0.247, which indicates a small/weak correlation. The adjusted coefficient of determination is 0.041 and indicates that the perceived performance appraisal justice factors can explain 4.1% of the variance in discretionary effort.

Table 51: ANOVA for the regression analysis for Hypothesis 2

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.829	3	0.943	3.006	.033[b]
	Residual	43.597	139	0.314		
	Total	46.425	142			
a. Dependent Variable: TotalDE						
b. Predictors: (Constant), TotalIJ, TotalIPJ, TotalPJ						

The ANOVA table (Table 51) shows that the p value (sig) is less than 0.05, which indicates that the model is a good fit for the data.

Table 52: Coefficients Table for the regression analysis for Hypothesis 2

Model		Unstandardized Coefficients		Standardised Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	3.73	0.223		16.711	0	3.288	4.171
	TotalPJ	0.131	0.069	0.211	1.916	0.057	-0.004	0.267
	TotalIPJ	0.071	0.063	0.114	1.135	0.258	-0.053	0.195
	TotalIJ	-0.038	0.065	-0.065	-0.584	0.56	-0.166	0.09
a. Dependent Variable: TotalDE								

Based on the p values (sig) from Table 52, none of the perceived performance appraisal justice factors is a good predictor of discretionary effort.

The results of this analysis does not provide sufficient statistical evidence to reject the null hypothesis.

5.8.3 Hypothesis 3

Research Question 3: Is there a significant relationship between the perceived fairness/justice of performance appraisals and intention to turnover?

The null hypothesis ($H_0$3) was that “no significant relationship exists between the perceived fairness/justice of performance appraisals and intention to turnover”. The alternate hypothesis one ($H_1$3) was that “a significant relationship exists between the perceived fairness/justice of performance appraisals and intention to turnover”.

Table 53 shows that no variables were removed from the analysis.

Table 53: Variables Entered/Removed for Hypothesis 3

Model	Variables Entered	Variables Removed	Method
1	TotalIJ, TotalIPJ, TotalPJ[b]		Enter
a. Dependent Variable: TotalITT			
b. All requested variables entered.			

Table 54: Model Summary for Hypothesis 3

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	.539[a]	0.291	0.276	0.98191	0.291	19.005	3	139	0
a. Predictors: (Constant), TotalIJ, TotalIPJ, TotalPJ									

The multiple correlation coefficient in Table 54 is 0.539, which indicates a large/strong correlation. The adjusted coefficient of determination is 0.276 and indicates that the perceived performance appraisal justice factors can explain 27.6% of the variance in intention to turnover.

Table 55: ANOVA for the regression analysis for Hypothesis 3

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	54.971	3	18.324	19.005	.000[b]
	Residual	134.017	139	0.964		
	Total	188.988	142			
a. Dependent Variable: TotalITT						
b. Predictors: (Constant), TotalIJ, TotalIPJ, TotalPJ						

The ANOVA table (Table 55) shows that the p value (sig) is less than 0.05, which indicates that the model is a good fit for the data.

Table 56: Coefficients Table for the regression analysis for Hypothesis 3

Model		Unstandardized Coefficients		Standardised Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	5.474	0.391		13.989	0	4.7	6.248
	TotalPJ	-0.649	0.12	-0.517	-5.399	0	-0.887	-0.411
	TotalIPJ	-0.023	0.11	-0.019	-0.214	0.831	-0.24	0.193
	TotalIJ	-0.023	0.114	-0.02	-0.203	0.839	-0.248	0.201
a. Dependent Variable: TotalITT								

Based on the p values (sig) from Table 56, only procedural justice is a good predictor of intention to turnover.

The results of this analysis provides sufficient statistical evidence that the null hypothesis can be rejected in favour of the alternative hypothesis.

5.8.4 Hypothesis 4

Research Question 4: Is there a significant relationship between employee engagement and discretionary effort?

The null hypothesis ($H_0$4) was that "no significant relationship exists between employee engagement and discretionary effort". The alternate hypothesis ($H_1$4) was that "a significant relationship exists between employee engagement and discretionary effort".

Table 57 shows that no variables were removed from the analysis.

Table 57: Variables Entered/Removed for Hypothesis 4

Model	Variables Entered	Variables Removed	Method
1	TotalCEn, TotalEEn, TotalPEn[b]		Enter
a. Dependent Variable: TotalDE			
b. All requested variables entered.			

Table 58: Model Summary for Hypothesis 4

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	.720[a]	0.518	0.508	0.40121	0.518	49.805	3	139	0
a. Predictors: (Constant), TotalCEn, TotalEEn, TotalPEn									

The multiple correlation coefficient in Table 58 is 0.72, which indicates a large/strong correlation. The adjusted coefficient of determination is 0.508 and indicates that the factors of employee engagement can explain 50.8% of the variance in discretionary effort.

Table 59: ANOVA for the regression analysis for Hypothesis 4

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	24.051	3	8.017	49.805	.000b
	Residual	22.374	139	0.161		
	Total	46.425	142			
a. Dependent Variable: TotalDE						
b. Predictors: (Constant), TotalCEn, TotalEEn, TotalPEn						

The ANOVA table (Table 59) shows that the p value (sig) is less than 0.05, which indicates that the model is a good fit for the data.

Table 60: Coefficients Table for the regression analysis for Hypothesis 4

Model		Unstandardized Coefficients		Standardised Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	1.135	0.275		4.132	0	0.592	1.679
	TotalPEn	0.41	0.081	0.401	5.048	0	0.25	0.571
	TotalEEn	-0.006	0.06	-0.007	-0.097	0.923	-0.125	0.113
	TotalCEn	0.338	0.078	0.393	4.33	0	0.183	0.492
a. Dependent Variable: TotalDE								

Based on the p values (sig) from Table 60, only physical engagement and cognitive engagement are good predictors of discretionary effort.

The results of this analysis provides sufficient statistical evidence that the null hypothesis can be rejected in favour of the alternative hypothesis.

5.8.5 Hypothesis 5

Research Question 5: Is there a significant relationship between employee engagement and intention to turnover?

The null hypothesis ($H_0$5) was that “no significant relationship exists between employee engagement and intention to turnover”. The alternative hypothesis ($H_1$5) was that “a significant relationship exists between employee engagement and intention to turnover”.

Table 61 shows that no variables were removed from the analysis.

Table 61: Variables Entered/Removed for Hypothesis 5

Model	Variables Entered	Variables Removed	Method
1	TotalCEn, TotalEEn, TotalPEn[b]		Enter
a. Dependent Variable: TotalITT			
b. All requested variables entered.			

Table 62: Model Summary for Hypothesis 5

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	.522[a]	0.273	0.257	0.99439	0.273	17.376	3	139	0
a. Predictors: (Constant), TotalCEn, TotalEEn, TotalPEn									

The multiple correlation coefficient in Table 62 is 0.522, which indicates a medium/moderate correlation. The adjusted coefficient of determination is 0.257 and indicates that the employee engagement factors can explain 25.7% of the variance in intention to turnover.

Table 63: ANOVA for the regression analysis for Hypothesis 5

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	51.544	3	17.181	17.376	.000[b]
	Residual	137.444	139	0.989		
	Total	188.988	142			
a. Dependent Variable: TotalITT						
b. Predictors: (Constant), TotalCEn, TotalEEn, TotalPEn						

The ANOVA table (Table 63) shows that the p value (sig) is less than 0.05, which indicates that the model is a good fit for the data.

Table 64: Coefficients Table for the regression analysis for Hypothesis 5

Model		Unstandardized Coefficients		Standardised Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	6.514	0.681		9.567	0	5.168	7.86
	TotalPEn	0.03	0.201	0.014	0.147	0.883	-0.369	0.428
	TotalEEn	-0.846	0.15	-0.534	-5.656	0	-1.141	-0.55
	TotalCEn	0.014	0.193	0.008	0.075	0.941	-0.368	0.396
a. Dependent Variable: TotalITT								

Based on the p values (sig) from Table 64, only emotional engagement is a good predictor of intention to turnover.

The results of this analysis provides sufficient statistical evidence that the null hypothesis can be rejected in favour of the alternative hypothesis.

5.9 Conclusion

The statistical analysis resulted in changes in the groupings of some of the theoretical measurement scales to improve construct validity. The results also showed sufficient levels of reliability. Multiple regression analysis was utilised to test the hypotheses.

The results of the statistical analysis showed the following:

- The null hypothesis was rejected for hypothesis one, implying that a significant relationship exists between perceived performance appraisal justice and employee engagement.
- The null hypothesis was accepted for hypothesis two, implying that no significant relationship exists between perceived performance appraisal justice and discretionary effort.
- The null hypothesis was rejected for hypothesis three, implying that a significant relationship exists between perceived performance appraisal justice and intention to turnover.
- The null hypothesis was rejected for hypothesis four, implying that a significant relationship exists between employee engagement and discretionary effort.

- The null hypothesis was rejected for hypothesis five, implying that a significant relationship exists between employee engagement and intention to turnover.

These results are discussed in more detail and in relation to the existing literature in Chapter 6.

Chapter 6: Discussion of Results

6.1 Introduction

In this chapter, the research findings are discussed and compared to the literature reviewed in Chapter two. The main aim of this study was to identify if significant relationships existed between perceived performance appraisal justice (independent variable) and two outcome variables of employee engagement, viz. discretionary effort and intention to turnover (dependent variables). The relationship between employee engagement (independent variable) and the outcome variables discretionary effort and intention to turnover (dependent variables) were also investigated in a confirmatory manner in an attempt to be able to explain the results of the main objective.

6.2 Overview of Demographic Variables

A total of 164 responses were received to the online survey. Of these responses, 16 of the individuals did not undergo performance appraisals, and as such, these responses had to be removed. A further five responses had to be removed as they were determined to be outliers. This left a final sample of 143 responses that were used for the statistical analyses.

At the outset, and based on the model proposed in Chapter three, there was a maximum of four independent variables that would be used in the regression analysis. Thus for an $\alpha = 0.05$ and for a medium effect size, the minimum sample size for the multiple correlation analyses was 84 (Cohen, 1992). However, after conducting the factor analysis, the maximum number of independent variables, for any of the required regression analyses, reduced to three. The minimum sample size, therefore, reduced to 76. The sample size of 143 in this study was acceptable when compared to the minimum required sample size of 76.

This study considered the demographic variables of gender, age and tenure (the number of years for which the respondent was employed at their respective organisations at the time of the data collection). It was found that 45% of the sample was female, and 55% was male. This is consistent with the gender distribution of employed South Africans as at the second quarter of 2018, which indicated that females accounted for 43.8% of the employed population (Statistics South Africa, 2018).

In this study, the majority of the respondents (66%) were aged between 30-39 years of age, and this was followed by individuals aged between 40-49 years of age (20%).

Schaufeli & Bakker (2004) have stated that “older employees feel more engaged” based on finding a weak correlation between age and employee engagement, measured by the UWES (p. 18). A similar trend was found in a South African Human Resource practice study, where it was found that 11% of respondents were disengaged and that this number increased to 31% for respondents below 30 years of age (SA Board for People Practices, 2014)

With regards to tenure, the majority of the respondents were employed for five years or less. The frequency trend for tenure showed a decreasing number of respondents as tenure increased. According to Trahant (2009), employee engagement is highest at the point of hiring an employee and decreases by 9% in the first year and by more than 12% over five years. This could explain the frequency trend for tenure.

In this study, the demographic variables were not crucial to the research questions. Due to this, the theoretical relationships discussed here were not investigated as part of the statistical analyses. Furthermore, the critical articles reviewed as part of this study, with regards to perceived performance appraisal justice, did not consider the demographic variables discussed here.

6.3 Overview of the Constructs

6.3.1 Discretionary Effort

Discretionary effort was measured by Lloyd's (2008) seven item discretionary effort scale. An analysis of the discretionary effort construct was provided in section 5.4 in Chapter five. Factor analysis was conducted to confirm the construct validity. Confirmatory factor analysis was conducted first, as this scale has been previously developed and validated. All of the factor loadings are >0.5; however, the loadings for DE2, DE3 and DE4 are less than 0.7. The AVE is 0.52, implying that convergent validity is acceptable. Due to this construct being a one factor construct, it was not possible to determine the discriminant validity. Due to this, exploratory factor analysis was conducted to confirm if indeed the discretionary effort construct is a one factor construct. The exploratory factor analysis confirmed that the

discretionary effort construct is a one factor construct and that it was not necessary to remove any of the items.

The Chronbach alpha coefficient for the one factor scale was 0.88, which is greater than the minimum threshold of 0.6. Furthermore, based on the classification of Table 6, the construct has very good reliability, thus indicating that the correct construct was being measured. The Chronbach alpha from this study also compares well with the values obtained by Lloyd (2008) (0.87) and Shuck et al. (2011) (0.93).

Discretionary effort has been defined as the extra effort that employees put into their jobs, above and beyond the minimum requirements (Shuck et al., 2011). Towers Perrin (2003) has defined this extra effort as “extra time, brainpower and energy” (p. 2). In some studies, discretionary effort is referred to extra-role performance (Bailey et al., 2017). The mean score for discretionary effort in this study was 4.29, which indicates a degree of discretionary effort that is higher than “Agree” based on the scale that was utilised. This implies that the respondents, on average, exerted a high degree of discretionary effort and that the discretionary effort level in South Africa is high.

Discretionary effort has been shown to be an outcome variable of employee engagement by Shuck et al. (2011). Furthermore, according to Bailey et al. (2017), all the studies included in their narrative synthesis, focusing on extra-role performance, found links between engagement and extra-role performance, which included, citizenship behaviour, innovative work behaviour, personal initiative, knowledge sharing and creativity.

The discretionary effort data was moderately negatively skewed and platykurtic. Data that is negatively skewed indicates a pile up of data to the right of the distribution. Due to this, there is a moderately low frequency of low discretionary effort scores. The platykurtic distribution means that the results have a wide range.

6.3.2 Intention to Turnover

Colarelli's (1984) three point intention to turnover scale was utilised. An analysis of the discretionary effort construct was provided in section 5.5 in Chapter five. Factor analysis was conducted to confirm the construct validity. Confirmatory factor analysis was conducted first, as this scale has been previously developed and

validated. All the item loadings were >0.7, indicating that there were no convergent validity issues. Furthermore, the AVE was 0.76 and was greater than the threshold minimum of 0.5. Due to this construct being a one factor construct, it was not possible to determine the discriminant validity. Due to this, exploratory factor analysis was conducted to confirm if indeed the intention to turnover construct is a one factor construct. The exploratory factor analysis confirmed that the intention to turnover construct is a one factor construct and that it was not necessary to remove any of the items.

The Chronbach alpha coefficient for the one factor scale was 0.9, which is greater than the minimum threshold of 0.6. Furthermore, based on the classification of Table 6, the construct has very good reliability, thus indicating that the correct construct was being measured. The Chronbach alpha from this study is higher than the values obtained by Colarelli (1984) (0.75), (Saks, 2006) (0.82) and Shuck et al. (2011) (0.81).

Intention to turnover has been defined as the probability that an employee will leave their current job in the near future (Carmeli & Weisberg, 2006). It is a conscious and deliberate desire of an employee to leave the employ of their employer and is considered to be the last step in the turnover decision process, in that an employee will first have the intention to turnover, before actually quitting their job (Mobley et al., 1978). The mean score for intention to turnover in this study was 3.32, which indicates a degree of intention to turnover that is higher than “Neutral” based on the scale that was utilised. This implies that the respondents, on average, have the intent to turnover.

The intention to turnover data was fairly symmetric with a slight negative skewness and was platykurtic. Data that is negatively skewed indicates a pile up of data to the right of the distribution. The platykurtic distribution means that the results have a wide range.

6.3.3 Employee Engagement

The job engagement scale derived by Rich et al. (2010) was used to measure employee engagement, as it was better suited to the definition of employee engagement utilised in this study. This measurement scale consisted of three factors, viz. physical engagement, emotional engagement and cognitive engagement. An analysis of the employee engagement construct was provided in section 5.6 in Chapter five. Factor analysis was conducted to confirm the construct validity. Confirmatory factor analysis was conducted first, as this scale has been previously developed and validated. Convergent validity was verified; however, the MSV was greater than AVE for physical engagement which violated the condition for discriminant validity. Due to this, exploratory factor analysis was conducted to improve the validity of the construct.

Based on the three methods carried out for the determination of the number of factors, there was evidence that the construct should be reduced to a two factor construct. Due to this, rotated factor loadings were determined for both a two factor and three factor extraction. The two factor extraction had no cross loadings and suggested that physical engagement and cognitive engagement were measuring the same factor. This did not make sense as these two factors are quite distinct from each other. Upon further inspection of the cross loadings of the three factor extraction, it was identified that by deleting two items from the physical engagement scale, a three factor extraction could be retained without any significant cross loadings.

The Chronbach alpha coefficients for the three factor scale were 0.877 for physical engagement, 0.927 for emotional engagement and 0.936 for cognitive engagement. All these coefficients were greater than the minimum threshold of 0.6. Furthermore, based on the classification of Table 6, the factors had very good reliability, thus indicating that the correct factors were being measured. The Chronbach alpha coefficients from this study are comparable to the coefficients achieved by Rich et al. (2010), which was between 0.89 to 0.94.

Kahn's (1990) theory of engagement was used as it was the most fitting theory based on the definition of employee engagement that was utilised in this study. This definition for employee engagement is “an individual employee’s cognitive, emotional, and behavioural state directed toward desired organisational outcomes”

(Shuck & Wollard, 2010). The mean score for employee engagement in this study was 4.13, which is closely related to “Agree” based on the scale used in this study. Therefore, on average, the respondents cognitive, emotional and behavioural states were directed towards desired organisational outcomes.

The employee engagement total item was moderately negatively skewed and was platykurtic. Data that is negatively skewed indicates a pile up of data to the right of the distribution. The platykurtic distribution means that the results have a wide range.

6.3.4 Perceived Performance Appraisal Justice

Colquitt's (2001) four factor scale was utilised to measure the perceived performance appraisal justice. The four factors were procedural justice, distributive justice, interpersonal justice and informational justice. This was a generic scale developed to measure the factors of justice, and could be modified to suit the situation. In this case, it was modified to suit the measurement of performance appraisal justice similarly as Jawahar (2007) and Gupta and Kumar (2013).

An analysis of the perceived performance appraisal justice construct was provided in section 5.7 in Chapter 5. Factor analysis was conducted to confirm the construct validity. Confirmatory factor analysis was conducted first, as this scale has been previously developed and validated. Convergent validity was verified; however, the MSV was greater than AVE for procedural justice which violated the condition for discriminant validity. Due to this, exploratory factor analysis was conducted to improve the validity of the construct.

The exploratory factor analysis suggested that a three factor extraction was more suitable to the data. Items PJ1, PJ6 and IJ1 were removed due to issues with cross-loadings and low factor loading scores. It was also found that the procedural justice items and distributive justice items were, in fact, measuring the same factor. This is plausible as if a procedure is thought to be fair, then the outcomes from that procedure should be fair.

The Chronbach alpha coefficients for the three factor scale were 0.936 for procedural justice, 0.975 for interpersonal justice and 0.912 for informational justice. All these coefficients were greater than the minimum threshold of 0.6.

Furthermore, based on the classification of Table 6, the factors had very good reliability, thus indicating that the correct factors were being measured.

The mean score for perceived performance appraisal justice in this study was 3.44, which is closer to being “Neutral” than “Agree” based on the scale used in this study. Therefore, on average, the respondents perceived that their performance appraisals were tending to be fair. Furthermore, if the total scores for the factors are considered, it can be seen that on average procedural justice tended to “Neutral” (3.05), interpersonal justice tended to “Agree” (4.07) and informational justice tended closer to “Neutral” (3.40).

The skewness for procedural justice and informational justice were negative but fairly symmetrical. Interpersonal justice was highly skewed. The total item score for perceived performance appraisal justice was slightly negatively skewed but fairly symmetrical. All the distributions were platykurtic, implying that they had wide ranges.

6.4 Research Question One

Research Question 1: Is there a significant relationship between the perceived fairness/justice of performance appraisals and employee engagement?

The null hypothesis was that “no significant relationship exists between the perceived fairness/justice of performance appraisals and employee engagement” ($H_0$1). The alternate hypothesis ($H_1$1) was that “a significant relationship exists between the perceived fairness/justice of performance appraisals and employee engagement”.

6.4.1 Interpretation of the Results

The multiple correlation coefficient for the factors of perceived performance appraisal justice was 0.422, and the factors explained 16.0% of the variance in employee engagement. There was therefore sufficient statistical evidence to reject the null hypothesis in favour of the alternative hypothesis at the 95% confidence level. The multiple regression analysis showed that only procedural justice was a significant predictor variable. Furthermore, the beta coefficient of procedural justice in the regression model was positive, and this implies that there is a positive relationship with employee engagement.

It can, therefore, be concluded that in this sample, perceived performance appraisal justice has a medium/moderate positive relationship with employee engagement.

This is consistent with the work of V. Gupta and Kumar (2013). The main difference between these results and that of V. Gupta and Kumar (2013) is that in their study, they found significant relationships between distributive and informational justice and employee engagement, whereas, in this study, only procedural justice was a significant predictor of employee engagement. It must also be noted that in this study, procedural and distributive justice items were grouped together under procedural justice. Nevertheless, these differences could be explained based on the context of the study. The study of V. Gupta and Kumar (2013) was based on Indian professionals, and the unit of analysis in this study was individuals that undergo performance appraisals in South Africa.

6.5 Research Question Two

Research Question 2: Is there a significant relationship between the perceived fairness/justice of performance appraisals and discretionary effort?

The null hypothesis ($H_0$2) was that “no significant relationship exists between the perceived fairness/justice of performance appraisals and discretionary effort”. The alternative hypothesis ($H_1$2) was that “a significant relationship exists between the perceived fairness/justice of performance appraisals and discretionary effort.”

6.5.1 Interpretation of the Results

The multiple correlation coefficient for the factors of perceived performance appraisal justice and discretionary effort was 0.247, and the factors explained 4.10% of the variance in discretionary effort. The factors of perceived performance appraisal justice were therefore not significant predictor variables for discretionary effort. There was consequently sufficient statistical evidence to accept the null hypothesis at the 95% confidence level. It can, therefore, be concluded that in this sample, perceived performance appraisal justice does not have a significant relationship with discretionary effort.

Based on the literature review conducted for this study, this research question has not been considered before. This result can, therefore not be compared to other studies with respect to discretionary effort. However, in a study based on discretionary work behaviours, Collins and Mossholder (2017) posited that

employees “who thought about leaving may not have reciprocated fairness with performance because its instrumental value for future returns was uncertain” (p. 294). Similarly, based on the results of this study, employees may not have reciprocated fairness with performance because “its instrumental value for future returns was uncertain” (Collins & Mossholder, 2017, p. 294). This is consistent with Kahn's (1990) theory of engagement where people have different versions or dimensions of themselves, which they employ to varying degrees to their work roles, depending on the prevailing conditions.

6.6 Research Question Three

Research Question 3: Is there a significant relationship between the perceived fairness/justice of performance appraisals and intention to turnover?

The null hypothesis ($H_0$3) was that “no significant relationship exists between the perceived fairness/justice of performance appraisals and intention to turnover”. The alternate hypothesis one ($H_1$3) was that “a significant relationship exists between the perceived fairness/justice of performance appraisals and intention to turnover”.

6.6.1 Interpretation of the Results

The multiple correlation coefficient for the factors of perceived performance appraisal justice and intention to turnover was 0.539, and the factors explained 27.6% of the variance in intention to turnover. The factors of perceived performance appraisal justice were, therefore, significant predictor variables for intention to turnover. There was consequently sufficient statistical evidence to reject the null hypothesis in favour of the alternative hypothesis at the 95% confidence level.

Furthermore, from the results of the regression analysis, only the procedural justice factor, was a good predictor variable for intention to turnover. The beta coefficient for this factor was negative. It can, therefore, be concluded that in this sample, perceived performance appraisal justice has a significant negative relationship with intention to turnover.

Based on the literature review conducted for this study, this research question has not been considered before. This result can, therefore not be compared to other studies. However, based on the literature review in Chapter two, an unfair performance appraisal can result in a breakdown in trust, and Kahn's (1990)

research on engagement has shown that supportive and trusting interpersonal relationships, promoted psychological safety, and May, Gilson, and Harter (2004) have found that "positive supervisor relations were positively related to psychological safety" (p. 11), which is a requirement for employee engagement.

6.7 Research Question Four

Research Question 4: Is there a significant relationship between employee engagement and discretionary effort?

The null hypothesis ($H_0$4) was that "no significant relationship exists between employee engagement and discretionary effort". The alternate hypothesis ($H_1$4) was that "a significant relationship exists between employee engagement and discretionary effort".

6.7.1 Interpretation of the Results

The multiple correlation coefficient for the factors of employee engagement and discretionary effort was 0.720, and the factors explained 50.8% of the variance in discretionary effort. There was therefore sufficient statistical evidence to reject the null hypothesis in favour of the alternative hypothesis at the 95% confidence level. It can, therefore, be concluded that in this sample employee engagement has a significant relationship with discretionary effort. Furthermore, from the results of the regression analysis, physical engagement and cognitive engagement were good predictor variables. These variables had a positive relationship with discretionary effort as their beta values were positive.

These results are consistent with the results of Shuck et al. (2011), where a positive relationship between employee engagement and discretionary effort was shown. Furthermore, in their study, employee engagement accounted for 30.8% of the variance in discretionary effort, and this was determined at a 99% confidence level.

6.8 Research Question Five

Research Question 5: Is there a significant relationship between employee engagement and intention to turnover?

The null hypothesis ($H_0$5) was that "no significant relationship exists between employee engagement and intention to turnover". The alternative hypothesis ($H_1$5)

was that “a significant relationship exists between employee engagement and intention to turnover”.

6.8.1 Interpretation of the Results

The multiple correlation coefficient for the factors of employee engagement and intention to turnover was 0.522, and the factors explained 25.7% of the variance in intention to turnover. There was therefore sufficient statistical evidence to reject the null hypothesis in favour of the alternative hypothesis at the 95% confidence level. It can, therefore, be concluded that in this sample employee engagement has a significant relationship with intention to turnover. Furthermore, from the results of the regression analysis, only emotional engagement was a good predictor variable. This variable had a negative relationship with intention to turnover, as it's beta value was negative.

These results are consistent with the results of Shuck et al. (2011), where a negative relationship between employee engagement and intention to turnover was shown. Furthermore, in their study, employee engagement accounted for 41.0% of the variance in discretionary effort, and this was determined at a 99% confidence level.

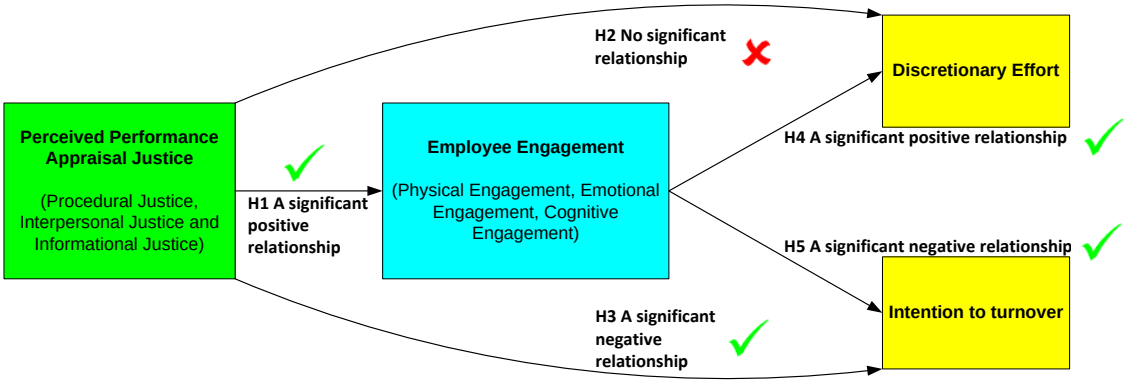
6.9 Conclusion

The results of this research study have shown the following:

- A significant positive relationship exists between perceived performance appraisal justice and employee engagement.
- There is no significant relationship between perceived performance appraisal justice and discretionary effort, despite the empirical justification that such a relationship exists.
- A significant negative relationship exists between perceived performance appraisal justice and intention to turnover.
- A significant positive relationship exists between employee engagement and discretionary effort.
- A significant positive relationship exists between employee engagement and intention to turnover.

Figure 16 depicts a summary of the relationships between the constructs that were under investigation in this study.

Figure 16: Summary of findings



Chapter 7: Conclusion

7.1 Introduction

The practical value of this research is with regards to how performance appraisals are conducted with regards to whether they are perceived to as being fair, and the implications of this with regards to employees and their discretionary effort and intention to turnover. While relationships between perceived performance appraisal justice and employee engagement have been shown by V. Gupta and Kumar (2013), research in perceived performance appraisal justice has not been extended to the outcome variables of employee engagement. This study seeks to fill this gap by trying to understand if such relationships exist.

An overview of the pertinent findings of this study will be discussed, as well as their implications with regards to human resource development, human resource management and performance management and motivation theory. The limitations of this study are discussed as well as implications for future research.

7.2 Major Findings

This research sought to determine if significant relationships exist between perceived performance appraisal justice and two of the more important outcome variables of employee engagement, viz. discretionary effort and intention to turnover. Even though the relationship between perceived performance appraisal justice and employee engagement was investigated by Gupta and Kumar (2013), it was reinvestigated in the context of this study, to provide insights to the investigation with regards to discretionary effort and intention to turnover.

In order to harness the potential benefits of an engaged workforce, Human Resource Development practitioners, due to their roles in increasing individual and organisational performance, are tasked to assist in the development of initiatives to create a more engaged workforce (Shuck et al., 2011). Understanding how perceived performance appraisal justice affects employee engagement, discretionary effort and intention to turnover, can help human resource practitioners in the designing of performance appraisal systems as well as with the training of managers who are supposed to conduct the appraisals, in order to unlock potential employee engagement value.

This study has contributed to literature in the following ways:

- Employee engagement was positioned as “an individual employee’s cognitive, emotional, and behavioural state directed toward desired organisational outcomes” (Shuck & Wollard, 2010, p. 103). This definition makes employee engagement into a much broader construct, because it combines several aspects of the self in work role performance and is more comprehensive in comparison to other definitions that are more narrow aspects of the self (Rich et al., 2010). This is consistent with Kahn's (1990) theory of engagement.
- This study confirmed the results of one other study that investigated the relationship between perceived performance appraisal justice and employee engagement, which was a strong argument for the model that proposed a relationship between perceived performance appraisal justice and the variables discretionary effort and intention to turnover. Furthermore, this study has shown that procedural justice was the only factor of perceived performance appraisal justice, which was a significant predictor of employee engagement. This is consistent with Smith and Bititci (2017) and Gruman and Saks (2011) who have proposed the linkages between perceived performance appraisal justice, employee engagement and improved organisational performance
- Employee engagement was confirmed to have a significant positive relationship with discretionary effort and a significant negative relationship with intention to turnover, which was consistent with the studies by Shuck et al. (2011) and Saks (2006). This study further showed that of the three factors of employee engagement, only physical engagement was a strong predictor of discretionary effort, while only the other two factors (cognitive engagement and emotional engagement) were strong predictors of intention to turnover.
- No significant relationship was found between perceived performance appraisal justice and discretionary effort, contrary to some of the literature presented in Chapter two and the proposed model, however, a significant negative relationship did exist between perceived performance appraisal justice and intention to turnover. It is important to note that only procedural justice was a strong predictor of intention to turnover. This was precisely the same as the relationship between perceived performance appraisal justice and employee engagement.

7.3 Implications for Management

The results of this study have the following implications for management:

- Employee engagement has been confirmed to have significant relationships with discretionary effort and intention to turnover. This further highlights the need to focus on employee engagement to improve discretionary effort and reduce intention to turnover. Furthermore, a distinction has been made with regards to which factors of employee engagement drive which outcome variables, which provides management with additional insight as to where to focus efforts, depending on what may be lacking in their organisation. Essentially, once management has assessed the organisation for discretionary effort and intention to turnover, they don't have to implement generic and broad initiatives to improve employee engagement in general. Instead, they can focus their efforts on either intention to turnover or discretionary effort or both.
- In the literature review conducted, only one study explored the relationship between perceived performance appraisal justice and employee engagement (V. Gupta & Kumar, 2013). This study has confirmed these findings and provides another aspect that should be considered to drive employee engagement. This is an area that has received limited focus, and as such, can be an explored to provide additional insights.
- Perceived performance appraisal justice has a significant relationship with intention to turnover; however, no significant relationship with discretionary effort. This implies that if employees are not happy with their performance appraisals, they may continue to perform with discretionary effort while deciding to leave the organisation. Supervisors, therefore, have a significant role to play with regards to the intention to turnover of their direct reports. This could be as a result of a lack of trust if a performance appraisal is not perceived to be fair or just.
- The factor of procedural justice in the perceived performance appraisal justice construct was the only variable that was a significant predictor variable for employee engagement and intention to turnover. It is important to note that in this study, the respondents did not distinguish between procedural justice and distributional justice and that the measuring items

were grouped together under procedural justice. The relationship between procedural justice in this study and employee engagement and intention to turnover could imply that the employee and organisational relationship is transactional.

- This study provides evidence, that performance appraisals should be taken very seriously, and supervisors that conduct these appraisals must take heed that when employees do not feel that these appraisals are fair, they will likely develop intentions to turnover.

7.4 Recommendations to South African Companies

Perceived performance appraisal justice is a worthy aspect for companies to focus on, and to devote time and energy on, due to its link with employee engagement and intention to turnover. Furthermore, the factor of procedural justice in this study, which included the combined measuring items for both procedural justice and distributive justice (from a theoretical perspective), indicates that the focus should be on the justice of the procedure, as well as the distribution of benefits. If this is not done, employees will have a higher intention to turnover.

In a country like South Africa that has a scarce skills shortage (Balwanz & Ngcwangu, 2016), this would be one of the areas that organisations should focus on to retain not only scarce skill employees but all good employees in general. Perceived performance appraisal justice and employee engagement have been shown to be significant predictors of intention to turnover, and employee engagement is a significant predictor of discretionary effort. These constructs should, therefore, feature high on the focus areas for human resource practitioners to improve the performance of individuals, with the ultimate goal of assisting the organisation in achieving performance targets and goals, especially with the current economic climate (The World Bank, 2019).

Furthermore, organisations should ensure that managers and supervisors conducting performance appraisals are aware of the impacts of perceived performance appraisal justice and its impacts on employee engagement and intention to turnover. This could be another avenue that human resource development practitioners could focus on to improve employee engagement and retention.

The benefits of employee engagement have been discussed in detail in chapter one and two. Based on the results of this study, employee engagement should be a strong agenda within organisations, if not a part of company strategic objectives with regards to performance and competitive advantage (Albrecht et al., 2015; Dusterhoff et al., 2014).

7.5 Limitations of the research

The limitations of this research study are mainly associated with generalisability. Firstly, non-probabilistic sampling was utilised, and this method of sampling does not allow the quantification of sampling biases. Secondly, the data was collected from self-report questionnaires that could result in common method bias. The cross-sectional nature of the study only accounted for contextual factors at the time of data collection, and this could have affected the consistency of the results if the data is collected under a different contextual situation.

7.6 Recommendations for Future Research

Based on the results of this study, the following areas of future research are recommended.

- To validate the outcomes of this study, further research should be carried out on the relationship between perceived performance appraisal justice and outcome variables of employee engagement. In this study, only discretionary effort and intention to turnover were considered; however, other outcome variables may be of interest. Furthermore, this was the first study that has examined the relationship between perceived performance appraisal justice and discretionary effort and intention to turnover.
- Further research is also recommended to identify why there was no significant relationship between perceived performance appraisal justice and discretionary effort.
- It is also potentially worthwhile to investigate if employee engagement could be a mediating variable between perceived performance appraisal justice and the outcome variables of employee engagement.

7.7 Conclusion

Employee engagement is a well-researched topic, and the benefits of engaged employees are well known. This research study considered employee engagement in the context of perceived performance appraisal justice and has gone a step

further to look at the relationship and impact on discretionary effort and intention to turnover, which are two of the more important outcome variables of employee engagement.

The results of this study provided insights into the importance of perceived performance appraisal justice and serves as a basis for future research in this area. These insights can further be utilised by HRD professionals and managers/supervisors alike to improve business performance through employee engagement.

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Appendix 1: Multicolinearity Statistics

Employee Engagement

Coefficients[a]			
Model		Collinearity Statistics	
		Tolerance	VIF
1	TotalCEn	0.555	1.802
	TotalPEn	0.555	1.802
a. Dependent Variable: TotalEEn			

Coefficients[a]			
Model		Collinearity Statistics	
		Tolerance	VIF
1	TotalEEn	0.591	1.691
	TotalCEn	0.591	1.691
a. Dependent Variable: TotalPEn			

Coefficients[a]

		Collinearity Statistics	
Model		Tolerance	VIF
1	TotalPEn	0.772	1.296
	TotalEEn	0.772	1.296
a. Dependent Variable: TotalCEn			

Perceived Performance Appraisal Justice

Coefficients[a]			
Model		Collinearity Statistics	
		Tolerance	VIF
1	TotalPJ	0.740	1.350
	TotalIPJ	0.740	1.350
a. Dependent Variable: TotalIJ			

Coefficients[a]			
Model		Collinearity Statistics	
		Tolerance	VIF
1	TotalIPJ	0.713	1.403
	TotalIJ	0.713	1.403
a. Dependent Variable: TotalPJ			

Coefficients[a]			
Model		Collinearity Statistics	
		Tolerance	VIF
1	TotalIJ	0.597	1.674
	TotalPJ	0.597	1.674
a. Dependent Variable: TotalIPJ			

Appendix 2: Informed Consent and Questionnaire

Dear Respondent,

I would like to invite you to take part in a questionnaire on employee engagement and the perceived fairness of your performance appraisal. This questionnaire is anonymous and no names or identifying information is required. Answers are combined in a spreadsheet without a trace of email. Your participation is voluntary and you can withdraw at any time without penalty.

As it is difficult to obtain enough responses I will be very grateful for your participation. It should take you approximately 10-15 minutes to complete the questionnaire.

Please answer as honestly as possible.

Your contribution to this research could result in changes with regards to how performance appraisals are conducted in future.

Researcher: Vikash Jawahar

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1. In which age category do you fall under?

Under 2020

20-29

30-39

40-49

50-59

60-69

70 and above

2. What is your gender

Male

Female

3. For how long have you worked at your organisation

0-5 years

6-10 years

11-15 years

16-20 years

21-25 years

26 or more years

4. Do you undergo a performance appraisal for your job/s

Yes

No

5	1. I work with intensity on my job	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree
	2. I exert my full effort to my job.	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree
	3. I devote a lot of energy to my job.	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree
	4. I try my hardest to perform well on my job.	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree
	5. I strive as hard as I can to complete my job.	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree
	6. I exert a lot of energy on my job.	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree
(Rich, Lepine, & Crawford, 2010)						
6	1. I am enthusiastic in my job.	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree
	2. I feel energetic at my job.	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree
	3. I am interested in my job.	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree
	4. I am proud of my job.	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree
	5. I feel positive about my job.	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree
	6. I am excited about my job.	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree
(Rich, Lepine, & Crawford, 2010)						
7	1. At work, my mind is focused on my job.	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree
	2. At work, I pay a lot of attention to my job.	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree
	3. At work, I focus a great deal of attention on my job.	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree
	4. At work, I am absorbed by my job.	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree
	5. At work, I concentrate on my job.	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree
	6. At work, I devote a lot of attention to my job.	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree
(Rich, Lepine, & Crawford, 2010)						

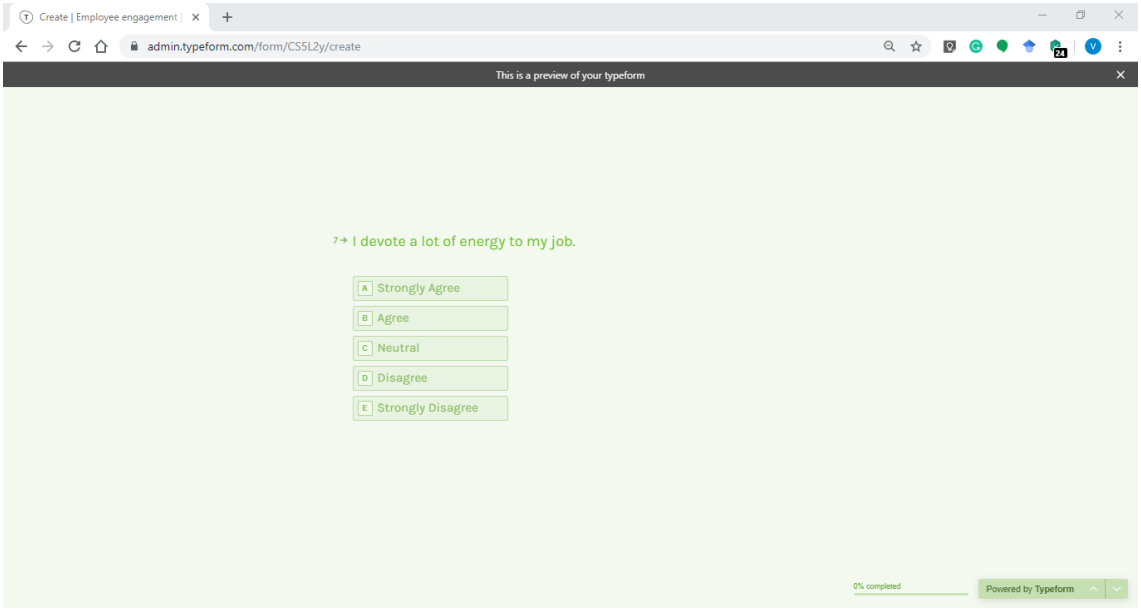
8	1. When I work, I really exert myself to the fullest, beyond what is expected	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree
	2. I finish a job even if it means sacrificing breaks or lunches	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree
	3. I do more than is expected of me	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree
	4. I voluntarily put in extra hours to achieve a result faster	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree
	5. I persist in overcoming obstacles to complete an important task	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree
	6. I put in extra effort when I find it necessary.	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree
	7. I work harder than expected to help my organisation be successful.	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree
Discretionary Effort Scale (Lloyd, 2008)						

9	1. I frequently think of quitting my job.	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree
	2. I am planning to search for a new job during the next 12 months.	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree
	3. If I have my own way, I will be working for a new organisation one year from now.	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree
Intention To Turnover Scale (Colarelli, 1984)						

10	The following items refer to the procedures used to arrive at your performance appraisal.					
	1. I am able to express my views and feelings during the performance appraisal meeting	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree
	2. I have influence over the outcomes of the performance appraisal procedures	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree
	3. The procedures followed during performance appraisal process have been applied consistently in my organization	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree
	4. The procedures followed during the performance appraisal process are free of bias	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree
	5. The performance appraisal procedures are based on accurate information	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree
	6. I can appeal against the outcomes arrived at by the performance appraisal procedures	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree
	7. The performance appraisal meetings upheld ethical and moral standards	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree
11	The following items refer to the outcome of your performance appraisal					
	1. The outcome of the performance appraisal process reflects the effort I have put into my work	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree
	2. The outcome of the performance appraisal process is appropriate for the work I completed	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree
	3. The outcome of the performance appraisal process reflects what I have contributed to the organization	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree
	4. The outcome of the performance appraisal process is justified, given my performance	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree

12	The following items refer to (the authority figure who enacted the procedure). To what extent:					
	1. During the performance appraisal meeting, my supervisor treated me in a polite manner	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree
	2. My supervisor treated me with dignity during the performance appraisal meeting	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree
	3. My supervisor treated me with respect during the performance appraisal meeting	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree
	4. My supervisor refrained from improper remarks or comments	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree
13	The following items refer to (the authority figure who enacted the procedure).					
	1. My supervisor was candid in (his/her) communications with me	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree
	2. My supervisor explained the procedures of the performance appraisal process thoroughly	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree
	3. My supervisor gave reasonable explanations regarding the procedures	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree
	4. My supervisor communicated details regarding the performance appraisal process in a timely manner	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree
	5. My supervisor tailored (his/her) communications to my specific needs	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree
Perceived Performance Appraisal Justice Scale (Colquitt, 2001; V. Gupta & Kumar, 2013)						

Electronic Questionnaire



Appendix 2: Consistency Matrix

Title: The relationship between perceived performance appraisal justice on employee engagement outcome variables

PROPOSITIONS/ QUESTIONS/ HYPOTHESES	LITERATURE REVIEW	DATA COLLECTION TOOL	ANALYSIS
Research Question 1: Is there a significant relationship between the perceived fairness/justice of performance appraisals and employee engagement?	Dusterhoff, Cunningham, and Macgregor (2014); Erdogan (2002); Kahn (1990); Gupta and Kumar (2013) ; Saks and Gruman (2014); Bailey, Madden, Alfes, and Fletcher (2017); Colquitt, (2001); Rich, Lepine, and Crawford (2010) ; Shuck and Wollard (2010) ; Colquitt (2012); Colquitt, Conlon, Wesson, Porter, and Ng (2001); Sak (2006)	Perceived justice measurement scale Job engagement measurement scale	Descriptive statistics, Factor analysis (CFA and EFA), Multiple regression

PROPOSITIONS/ QUESTIONS/ HYPOTHESES	LITERATURE REVIEW	DATA COLLECTION TOOL	ANALYSIS
Research Question 2: Is there a significant relationship between the perceived fairness/justice of performance appraisals and discretionary effort?	Dusterhoff et al., (2014); Erdogan (2002); Shuck, Reio, and Rocco (2011); Colquitt (2001); Towers Perrin (2003); Colquitt et al. (2001); Colquitt (2012)	Perceived Justice measurement scale Discretionary Effort measurement scale	Descriptive statistics, Factor analysis (CFA and EFA), Multiple regression
Research Question 3: Is there a significant relationship between the perceived fairness/justice of performance appraisals and intention to turnover?	(Dusterhoff et al., 2014)(Erdogan, 2002)(Shuck et al., 2011)(Colquitt, 2001) (Carmeli & Weisberg, 2006)(Colquitt et al., 2001)(Colquitt, 2012)	Perceived Justice measurement scale Intention to Turnover measurement scale	Descriptive statistics, Factor analysis (CFA and EFA), Multiple regression

PROPOSITIONS/ QUESTIONS/ HYPOTHESES	LITERATURE REVIEW	DATA COLLECTION TOOL	ANALYSIS
Research Question 4: Is there a significant relationship between employee engagement and discretionary effort?	Kahn (1990); Saks and Gruman (2014); Bailey et al. (2017) ; Rich et al. (2010) Shuck and Wollard (2010); Saks and Gruman (2014); Saks (2006)	Job engagement measurement scale Discretionary Effort measurement scale	Descriptive statistics, Factor analysis (CFA and EFA), Multiple regression
Research Question 5: Is there a significant relationship between employee engagement and intention to turnover?	Kahn (1990); Saks and Gruman (2014); Bailey et al. (2017); Rich et al. (2010) Shuck and Wollard (2010); Carmeli and Weisberg (2006); Saks and Gruman (2014); Saks (2006)	Job engagement measurement scale Intention to Turnover measurement scale	Descriptive statistics, Factor analysis (CFA and EFA), Multiple regression

Appendix 4: Codebook

Label	Items	Coding
Demographic Variables		
Age	In which age category do you fall?	<20 = 1 20-29 = 2 30-39 = 3 40-49 = 4 50-59 = 5 60-69 = 6 70 and above = 7
Gender	What is your gender?	Male = 1 Female = 2
Tenure	For how long have you worked at your organisation	0-5 years = 1 6-10 years = 2 11-15 years = 3 16-20 years = 4 20-25 years = 5 26 or more years = 6
Employee Engagement		
Physical Engagement (PEn)		Strongly Disagree = 1 Disagree = 2 Neutral = 3 Agree = 4 Strongly Agree = 5
PEn1	I work with intensity on my job	
PEn2	I exert my full effort to my job.	
PEn3	I devote a lot of energy to my job.	
PEn4	I try my hardest to perform well on my job.	
PEn5	I strive as hard as I can to complete my job.	
PEn6	I exert a lot of energy on my job.	
TotalPEn	Total Physical Engagement	
Emotional Engagement (EEn)		Strongly Disagree = 1 Disagree = 2 Neutral = 3 Agree = 4 Strongly Agree = 5
EEn1	I am enthusiastic in my job.	
EEn2	I feel energetic at my job.	
EEn3	I am interested in my job.	
EEn4	I am proud of my job.	
EEn5	I feel positive about my job.	
EEn6	I am excited about my job.	
TotalEEn	Total Emotional Engagement	
Cognitive Engagement (CEn)		Strongly Disagree = 1 Disagree = 2 Neutral = 3 Agree = 4 Strongly Agree = 5
CEn1	At work, my mind is focused on my job.	
CEn2	At work, I pay a lot of attention to my job.	
CEn3	At work, I focus a great deal of attention on my job.	
CEn4	At work, I am absorbed by my job.	
CEn5	At work, I concentrate on my job.	
CEn6	At work, I devote a lot of attention to my job.	
TotalCEn	Total Cognitive Engagement	
TotalEE	Total Employee Engagement	Strongly Disagree = 1 Disagree = 2 Neutral = 3 Agree = 4 Strongly Agree = 5

Label	Items	Coding
Discretionary Effort (DE)		
DE1	When I work, I really exert myself to the fullest, beyond what is expected	Strongly Disagree = 1 Disagree = 2 Neutral = 3 Agree = 4 Strongly Agree = 5
DE2	I finish a job even if it means sacrificing breaks or lunches	
DE3	I do more than is expected of me	
DE4	I voluntarily put in extra hours to achieve a result faster	
DE5	I persist in overcoming obstacles to complete an important task	
DE6	I put in extra effort when I find it necessary.	
DE7	I work harder than expected to help my organisation be successful.	
TotalDE	Total Discretionary Effort	
Intention to turnover (ITT)		
ITT1	I frequently think of quitting my job.	Strongly Disagree = 1 Disagree = 2 Neutral = 3 Agree = 4 Strongly Agree = 5
ITT2	I am planning to search for a new job during the next 12 months.	
ITT3	If I have my own way, I will be working for a new organisation one year from now.	
Total ITT	Total Intention to Turnover	

Label	Items	Coding
Perceived Performance Appraisal Justice		
Procedural Justice (PJ)		
PJ1	I am able to express my views and feelings during the performance appraisal meeting	Strongly Disagree = 1 Disagree = 2 Neutral = 3 Agree = 4 Strongly Agree = 5
PJ2	I have influence over the outcomes of the performance appraisal procedures	
PJ3	The procedures followed during performance appraisal process have been applied consistently in my organization	
PJ4	The procedures followed during the performance appraisal process are free of bias	
PJ5	The performance appraisal procedures are based on accurate information	
PJ6	I can appeal against the outcomes arrived at by the performance appraisal procedures	
PJ7	The performance appraisal meetings upheld ethical and moral standards	
TotalPJ	Total Procedural Justice	
Distributive Justice (DJ)		
DJ1	The outcome of the performance appraisal process reflects the effort I have put into my work	Strongly Disagree = 1 Disagree = 2 Neutral = 3 Agree = 4 Strongly Agree = 5
DJ2	The outcome of the performance appraisal process is appropriate for the work I completed	
DJ3	The outcome of the performance appraisal process reflects what I have contributed to the organization	
DJ4	The outcome of the performance appraisal process is justified, given my performance	
TotalDJ	Total Distributive Justice	
Interpersonal Justice (IPJ)		
IPJ1	During the performance appraisal meeting, my supervisor treated me in a polite manner	Strongly Disagree = 1 Disagree = 2 Neutral = 3 Agree = 4 Strongly Agree = 5
IPJ2	My supervisor treated me with dignity during the performance appraisal meeting	
IPJ3	My supervisor treated me with respect during the performance appraisal meeting	
IPJ4	My supervisor refrained from improper remarks or comments	
TotalIPJ	Total Interpersonal Justice	
Informational Justice (IJ)		
IJ1	My supervisor was candid in (his/her) communications with me	Strongly Disagree = 1 Disagree = 2 Neutral = 3 Agree = 4 Strongly Agree = 5
IJ2	My supervisor explained the procedures of the performance appraisal process thoroughly	
IJ3	My supervisor gave reasonable explanations regarding the procedures	
IJ4	My supervisor communicated details regarding the performance appraisal process in a timely manner	
IJ5	My supervisor tailored (his/her) communications to my specific needs	
TotalIJ	Total Informational Justice	
TotalPPAJ	Total Perceived Performance Appraisal Justice	Strongly Disagree = 1 Disagree = 2 Neutral = 3 Agree = 4 Strongly Agree = 5

Appendix 5: Ethics Clearance Approval

Gordon Institute of Business Science
University of Pretoria

04 July 2019

Jawahar Vikash

Dear Vikash

Please be advised that your application for Ethical Clearance has been approved.

You are therefore allowed to continue collecting your data.

Please note that approval is granted based on the methodology and research instruments provided in the application. If there is any deviation change or addition to the research method or tools, a supplementary application for approval must be obtained

We wish you everything of the best for the rest of the project.

Kind Regards

GIBS MBA Research Ethical Clearance Committee

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