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Fostering innovative behaviours through leadership and fairness: commitment and citizenship behaviours as successive mediators

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A thesis submitted to the faculty of Commerce, Law and Management in fulfilment of the requirements for the Degree of Doctor of Philosophy in Management

March 2018

Supervisor: Professor David Coldwell

DECLARATION

I, **Phomane Peter Khaola**, student number [1172797], declare that this thesis is my own work, and that I contributed adequately towards research findings published in articles stated below and included in my thesis.

Signature of student…….Date…….

Signature of supervisor……Date…….

ABSTRACT

Research literature not only suggests that the effects of leadership and organisational justice (social factors) on innovative work behaviour (IWB) are equivocal, but also presents a variety of intervening factors between the focal constructs. Conspicuously missing in the list of mediating factors is organisational citizenship behaviour (OCB), the factor that can theoretically facilitate IWBs. Similarly, although both OCB and IWB are discretionary work behaviours, little is surprisingly known about the relationship between these two extra-role constructs.

Drawing on literatures across various research domains, the aim of this study was to develop and test a model that links leadership and fairness to IWB through the successive mediating roles of affective commitment and OCB.

The study was based on survey of a random sample of 300 employees selected from 652 employees from a public university, and a convenient sample of 159 employees from private and state-owned enterprises in Lesotho. The Statistical Package for Social Sciences (SPSS) and the Analysis of Moment Structures (AMOS version 24) were used to analyse data. Specifically, the study used factor analysis; correlation; analysis of variance (ANOVA); and structural equation modelling techniques to address the hypothesised relationships. To reinforce quantitative results, an open-ended question on OCB was analysed qualitatively to give insights into why OCBs may facilitate IWBs.

The results suggest that the model that fitted data well is the one in which the effects of both leadership and organisational justice on IWBs were successively mediated by affective commitment and OCB. Because of its social and affiliation-oriented nature, this study submits

and concludes that OCB is an effective mediating factor between social factors (leadership and justice) and IWBs.

This study not only contributes to literature by presenting a new perspective on how social factors relate to IWBs, but also guides managers on appropriate interventions they can use to inspire employees to engage in affiliation-oriented and proactive OCBs.

***Key words**: Innovative work behaviour; leadership; organisational citizenship behaviour; organisational commitment; organisational justice.*

This work is dedicated to my mother and late sisters

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CERTIFICATE OF ORIGINALITY

I hereby certify that the research work presented in this thesis is, to the best of my knowledge, original, and except as acknowledged in the text, the material has not been submitted, either in whole or in part, for a degree at this or any other university.

I also declare that I have read and understood the University's rules, procedures, and policies relating to higher degrees at the University. I further certify that, to the best of my knowledge and belief, I have complied with the rules, procedures, and policies of the University.

_____ _____

Mr. Phomonae Peter Khaola Date

PUBLICATIONS

Refereed Journal publications

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LIST OF ACRONYMS

Abbreviation	Description
AMOS	Analysis of Moment Structures
ANOVA	Analysis of variance
AVE	Average variance extracted
CCB	Compulsory citizenship behaviour
CET	Cognitive evaluation theory
CFA	Confirmatory factor analysis
CFI	Comparative fit index
CI	Confidence interval
CIP	Creative and innovative performance
CR	Composite reliability
CWB	Counter-productive work behaviour
ECB	Entropic citizenship behaviour
EFA	Exploratory factor analysis
IWB	Innovative work behaviour
JD-R	Job demand-resources theory

KMO	Kaizer-Meyer-Olkin
K-S	Kolmogorov-Sminorv test
LMX	Leader-member-exchange
MCAR	Missing completely at random
MLQ	Multi-factor leadership questionnaire
MSV	Maximum shared variance
MVA	Missing values analysis
NFI	Normed fit index
OCB	Organisational citizenship behaviour
OCB-I	Organisational citizenship behaviour directed at individuals
OCB-O	Organisational citizenship behaviour directed at the organisation
RFI	Relative fit index
RMSEA	Root-mean-square error of approximation
SD	Standard deviation
SE	Standard error
SEM	Structural equation modelling

SET	Social exchange theory
SIP	Social information processing theory
SIT	Social identification/identity theory
SPSS	Statistical package for social sciences
SV	Shared variance
TLI	Tucker-Lewis index
VIF	Variance inflation factor

GLOSSARY OF TERMS

Affective commitment	An employee's emotional attachment to the organisation (Meyer & Allen, 1991)
Affiliation-oriented OCBs	Interpersonal and cooperative behaviours that sustain status quo and solidify or preserve relationships with others (MacKenzie, Podsakoff & Podsakoff, 2011; Van Dyne, Cummings & Parks, 1995).
Ambidexterity	Organisation's ability to balance exploration and exploitation of innovation (O'Reilly & Tushman, 2013).
Attention Capacity Theory	The theory asserting that humans have limited attention and cognitions to process information (Harrison & Wagner, 2016)
Behavioural Plasticity Theory	The extent to which behaviour is influenced by social experiences (Rank, Nelson, Allen & Xu, 2009).
Broaden-and-build Theory of positive emotions	The theory that holds that positive emotions can broaden thought-action repertoires of employees (Fredrickson, 2004)
Change-oriented OCBs	Adapting Bettencourt's (2004) definition, Choi (2007) defines change-oriented OCB as 'constructive efforts by individuals to identify and implement changes with respect to work

	methods, policies, and procedures to improve the situation and performance'.
Cognitive Evaluation Theory	This theory holds that leadership affect intrinsic motivation negatively and positively by means of controlling and providing information and support, respectively (Deci & Ryan, 1985; Shalley, Zhou & Oldham, 2004).
Conservation of Resources Theory	This theory holds that individuals accumulate valued resources to cope with work demands (with subsequent increase in individual well-being); but also that stressful work-events deplete accumulated resources and result in stressful situations (Hobfoll, 1989).
Creativity	The production of novel or original ideas, products, or procedures that are potentially useful to the organisation (Amabile, 1996; Baer, Oldham & Cummings, 2003)
Distributive justice	The fairness of outcome distribution in organisations (Adams, 1965)
Group Engagement Model	An extension of Group-Value model, Group Engagement model asserts that people form identities around social entities such as organisations, and these social identities in turn influence attitudes, values and behaviours (Blader & Tyler, 2009)
Entropic	The heuristic device asserting that extreme

Citizenship Behaviour	forms of either personal OCB (OCB-I) or organisational support OCB (OCB-O) generate negative behaviours which militate against the attainment of formal organisational goals (Coldwell & Callaghan, 2014:348).
Innovation	Implementation of creative ideas in organisations (Janssen, 2000; Scott & Bruce, 1994; 1998)
Innovative work behaviour	'The intentional creation, introduction and application of new ideas within a work role, group or organisation, in order to benefit role performance, the group, or the organisation' (Janssen, 2000:288; 2004:202).
Interactional justice	Perception of fairness of interpersonal treatment and accuracy of information during enactment of processes and procedures (Bies and Moag, 1986).
Intrinsic motivation	The extent to which an individual enjoys his/her work, and engages in it for its own sake (Deci & Ryan, 1985; Shalley, Zhou & Oldham, 2004)
Job-Demands Resources Theory	The theory that holds that an employee's work environment is characterised by *job demands* (physical, psychological, social, or organizational aspects of the job that require sustained physical and/or psychological effort or skills) and *job resources* (physical, psychological, social, or

	organizational aspects of the job that are functional in achieving work goals; reduce job demands and the associated physiological and psychological cost; and stimulate personal growth, learning, and development) (Agarwal, 2013; Demerouti, Bakker, De Jonge, Janssen, & Schaufeli, 2001)
Leadership	A process by which a person influences a group or individuals to achieve a common goal (Hailey, 2006; Yukl, 2012).
Norm of reciprocity	The notion that people assist and never harm those that assist them; implying that people reciprocate favourable treatment from others with positive responses, and unfavourable treatment with negative responses (Cropanzano & Mitchell, 2005; Gouldner, 1960)
Organisational citizenship behaviour	'The behaviour that is discretionary, not directly or explicitly recognised by the formal reward system, and that in the aggregate promotes the effective functioning of the organisation' (Organ, 1988:4); which was later redefined as 'performance that supports the social and psychological environment in which task performance takes place' (Organ, 1997:95)
Organisational commitment	*This refers to* 'one's emotional attachment to, identification with, and involvement in a particular organization' (Meyer and Allen,

	1991:67)
Organisational justice	Organisational justice or fairness expresses one's perceptions of fairness of outcome distribution (Adams, 1965); fairness of processes and procedures that underlie outcome decision (Leventhal, 1980; Thibaut and Walker, 1975); and fairness of interpersonal treatment and provision of accurate information during enactment of procedures (Bies and Moag, 1986).
Proactive behaviours	Anticipatory actions that employees take to impact themselves or their environments (Grant & Ashford, 2008)
Procedural justice	Perception of fairness of processes and procedures that underlie outcome decision in organisations (Leventhal, 1980; Thibaut and Walker, 1975)
Relational Identity Theory	The extent to which one defines oneself in terms of the role relationship with one's leader or co-workers (Sluss & Ashforth, 2007)
Resource Allocation Theory	This theory posits that individuals have finite cognitive resources, and using resources involves opportunity costs such that using resources in one activity depletes resources for another activity (Hobfoll, 2002)
Self-categorisation	An extention of Social Identification Theory, Self-Categorisation Theory holds that when

Theory	people identify closely with a given social group, they engage in a depersonalisation process such that they tend to perceive all members of a group as inter-changeable (Sluss & Ashford, 2007).
Social Exchange Theory	The theory that holds that people engage in a series of interdependent and contingent actions that generate reciprocal exchange obligations, and overtime, high quality relationships (Blau, 1964; Cropanzano & Mitchell, 2005).
Social Identification Theory	The notion that people classify themselves and others into various social categories such as organisational membership, gender, age, race, etc., and form their identities around such entities, which in turn influence their attitudes and behaviours (Ashforth & Mael, 1989; Tajfel & Turner, 1989)
Social Information Processing Theory	The theory that posits that employees' attitudes and behaviours are influenced by behaviours and cues from co-workers in their immediate social environment (Salancik & Pfeffer, 1978).
Target-similarity effects	The notion that employees are more likely to direct their reciprocation efforts to either the organization or individuals depending on whether they respectively perceive the organization or individuals to be the source of their assistance (Lavelle, Brokner, Konovsky,

	Price, Henley, Taneja, & Vinekar, 2009; McNeely & Meglino, 1994)
Transactional leadership	The style of leadership through which a leader influences followers through promising rewards for good performance; searching for deviations from rules and standards and taking corrective action; or intervening only if standards are not met (Jung, Chow & Wu, 2003; Rank, Nelson, Allen, & Xu, 2009).
Transformational leadership	The style of leadership through which a leader influences followers through articulating an inspiring vision; questioning old assumptions and encouraging creativity and innovation; considering individual needs and coaching; and charismatic role modelling (Avolio, Bass, & Jung, 1999; Jung, Chow & Wu, 2003)
Upper Echelons Theory	The view that manager's experiences, values, and personalities largely influence their interpretations of the situations they face, and in turn affect their choices (Hambrick, 2007)

CHAPTER 1
INTRODUCTION

1.1. Background

It has now become an accepted notion in the scholarly literature that discretionary, cooperative and innovative work behaviours that extend beyond role requirements hold promise for facilitating the competitive advantage of organisations. This notion can be traced back to recent history in the management of organisations.

As early as 1938, Barnard realised the need for organisational members to willingly cooperate for the good of the organisation. Katz and Kahn (1978) argued that for an organisation to function effectively, among other resources, it must have employees who undertake innovative and spontaneous activities that go beyond prescribed job requirements. These activities, variously labelled organisational citizenship behaviour (Organ, 1988); contextual performance (Borman & Motowidlo, 1993); organisational spontaneity (George & Brief, 1992); prosocial behaviour (Brief & Motowidlo, 1986); extra-role behaviour (Van Dyne, Cummings & Parks, 1995); civic citizenship (Graham, 1991); taking charge (Morrison & Phelps, 1999); personal initiative (Frese, Fay, Hilburger, Leng & Tag, 1997); innovative work behaviour (Janssen, 2000); job crafting (Wrzesniewski & Dutton, 2001); or citizenship performance (Borman, 2004); has been positively associated with different performance criteria (Podsakoff, MacKenzie, Paine, & Bachrach, 2000; Podsakoff, Whiting, & Podsakoff, 2009).

The above activities are collectively considered discretionary behaviours (performance) that go beyond the normal call of duty; and they are conceptually different from in-role or task activities that form one's core duties and responsibilities (Van Dyne *et al*., 1995). It has

been argued that 'an organisation that depends solely upon its blueprint of prescribed behaviour is a fragile social system' (Katz, 1964: 132, Janssen, 2000: 287).

Of the relationships amongst these extra-role behaviours, little has surprisingly been documented about the relationships between OCB and IWB (Turnipseed & Turnipseed, 2013; Xerri & Brunneto, 2013). Many studies have documented factors that may influence OCB, including a variety of employee attitudes, perceptions, personality traits, leadership, job characteristics and organisational environments (Podsakoff *et al*., 2000). Similarly, many factors specified at the individual, job, team, and organisational levels have been identified as antecedents of IWBs (Zhou & Hoever, 2014). However, most research on these performance criteria has focused on their separate antecedents, and little attempt has been made to synthesise past studies using these concepts (Carpini and Parker, 2017). Furthermore, although scholars have been interested in unravelling how managers can prompt employees to engage in creativity and innovation (IWB) as a stand-alone performance criterion (Harari, Reaves, & Viswesvaran, 2016), extant literature suggests that the direct relationships between leader behaviours (leadership and fairness) and IWB are at best equivocal; and at worst non-existent (Zhou & Hoever, 2014; Khazanchi & Masterson, 2011).

To address these gaps in the literature, this thesis reports on the study that focused on the relationships between OCB and IWB, and how social contextual factors (leadership and fairness) and affective commitment associate with them. Specifically, the study proposes and examines the model in which the effects of leadership and organisational justice on IWB are successively mediated by affective commitment and OCB. Thus the study delves deeper into the nature of

the relationship between OCB and IWB; and further proposes a 2-step sequential mediation model as an alternative perspective on how leadership and organisational justice may relate to IWBs in organisations.

In sum, the strategic importance of various discretionary behaviours in organisations has been indicated by a number of scholars before. Of these discretionary behaviours, researchers have recently shown the renewed interest in the relationships between OCB and IWB (Harari, *et al.*, 2016; Turnipseed & Turnipseed, 2013; Xerri & Brunetto, 2013).

1.2. Research Problem

Despite the fact that the origins of all citizenship-like behaviours can be traced back to what Katz (1964) and Katz and Kahn (1978) called *spontaneous and innovative behaviours* (Carpini & Parker, 2017; Podsakoff *et al*., 2000), recent focus has primarily been on affiliation-oriented OCBs (MacKenzie, Podsakoff, & Podsakoff, 2011*a*). Thus compared to extra-role behaviours such as OCB, only modest attempts have been made to study change-oriented OCBs such as IWB (Bettencourt, 2004; Choi, 2007; Marinova *et al.*, 2015). Particularly problematic has been the research paucity on the relationship between OCB and IWB (Turnipseed & Turnipseed, 2013; Xerri & Brunetto, 2013). The streams of research on OCB and IWB have generally developed independently, resulting in fragmented research that arguably defies integration and knowledge consolidation (Van Dyne *et al*., 1995). Carpini and Parker (2017) have noted that most research on performance concepts has focused on their separate antecedents and outcomes, while little work has been dedicated to synthesising across performance domains.

This study proposes and tests a conceptual model that links leadership and organisational justice to IWBs through organisational commitment and OCBs in series.

Another concern has been the failure of past studies to find consistent and direct relationships between predictors such as leadership, organisational justice, or commitment and IWB (Anderson, Potoňik, & Zhou, 2014; Mumford & Licuanan, 2004; Zhou & Hover, 2014). Due to lack of, or weak main effects of these predictors on IWBs (Zhou & Hover, 2014), there have been calls to explore mediating or moderating variables (Mumford, Scott, Gaddis, & Strange, 2002). In other words, more research is needed to discover explanatory mechanisms between IWB and its predictors, and boundary conditions within which these predictors can influence IWB. While a number of moderating and mediating factors have been suggested and confirmed before, noticeably missing has been the role played by OCB. This is surprising because OCB is a close relation of IWB.

Integrating literatures across different research domains, this study locates affective commitment and OCB as successive mediating (explanatory) variables between social factors (leadership and organisational justice) and IWB.

Another unresolved issue in the literature pertains to the relationship between organisational commitment and OCB when controlling for the relationship between organisational justice and OCB. Three competing models have previously been tested. The *mediated model* posits that the organisational justice – OCB link is mediated by organisational commitment; the *spurious model* suggests that organisational commitment has no relationship with OCB after controlling for the relationship between organisational justice and OCB; and the *direct effects model* suggests that organisational commitment and

organisational justice have direct effects on OCB, and hence none of the predictors is mediated by the other (Fassina, Jones, & Uggerslev, 2008*a*, Organ & Ryan, 1995). This study asserts that further research located in different settings is needed to test the validity of these models. For instance, it has been argued that organisational justice (grounded in equity principle) in the Western cultures may not have the same effects on OCB as organisational justice (grounded in equality principle) in collectivist cultures. In collectivist cultures employees may keep demonstrating OCB even when things are not equitable (Rego & Cunha, 2009). Thus the differences in culture point to continuing importance of contextual relevance in research relating to OCBs. In other words, as globalisation increases, it is vital to examine whether the management theories developed in Western countries hold in developing countries (Yen & Niehoff, 2004). Put together, the differences in societal culture that may imply the differences in the nature, meaning and importance of citizenship behaviours in different contexts prompted this study to investigate OCB and IWB in Africa (Farh *et al*., 1997; Farh *et al*., 2004).

Lastly, in spite of the broad consensus that IWB comprises of related but distinct dimensions of creativity (idea generation) and innovation (idea support and implementation), many prior studies have aggregated the two measures into one summative scale (Janssen, 2000; 2004; Anderson *et al*., 2014). Thus more nuanced studies are required to examine if the antecedents of IWB have similar or different correlations with IWB dimensions.

In summary, more work is needed to further elucidate the relationships between OCB and IWB. Furthermore, the mediating factors between leadership or fairness and IWB (other than those that

are predominantly psychological, affective or motivational) need to be identified and tested (Qu, Janssen, & Shi, 2015).

1.3. Aims and Objectives

Drawing on Social Exchange Theory (SET), Job Demands-Resources (JD-R) Theory, Social Identification Theory (SIT), and Cognitive Evaluation Theory (CET), the main aim of this study was to devise and test a model that links leadership and fairness to IWB through the successive mediating roles of organisational commitment and OCB. Secondary objectives were as follows.

- To examine the relationships between OCB and IWB;
- To evaluate the relationship between organisational commitment and OCB while controlling for the relationship between organisational justice and OCB;
- To explore if dimensions of IWB (creativity and innovation) are predicted by different factors; and
- To provide theoretical and practical implications of the results.

To address these objectives, the present study relied mainly on a cross-sectional, descriptive and quantitative-dominant research paradigm incorporating an added open-ended question that was analysed qualitatively to bolster quantitative data. Overall, 263 useful questionnaires collected from a sample of 459 employees formed the bases of the primary study, and correlations, ANOVAs, factor analyses, and structural equation modelling techniques based on SPSS and AMOS software packages were mainly used to analyse data. The details of the research method and approach are presented in chapter 3.

1.4. Theoretical and Practical Contributions

This study makes at least four contributions to management literature and practice. First, since the relationships between OCB and IWB have

not yet been fully explained (e.g. Turnipseed & Turnipseed, 2013), this research sheds light on the nature and relationships between these constructs. Thus in a grand scheme of things, the study stimulates theory development on the relationships between selected affiliation-oriented and change-oriented OCBs. Second, the study further evaluates the relationships of some popular situational social factors (leadership and perceived fairness) and individual level factors (commitment) with OCB and IWB (cf. Moorman, Niehoff, & Organ, 1993). This model has a potential to assist scholars to unravel the unique relationships of these antecedents with OCB and IWB. Of particular interest is the elucidation of how leadership and perceptions of fairness may affect IWB indirectly via the sequential mediation of affective commitment and OCB. Because of its social nature, this study propounds that OCBs can create an exciting environment in which IWBs can flourish. Third, by separating IWB into its processes (creativity and innovation), this study takes a unique and timely opportunity to contribute to theory development and practice. For instance, this fine-grained approach can stimulate theory refinement and application if antecedents relate to these processes in different ways. In this regard, theorists can continue to treat the dimensions separately, and managers can develop interventions that are targeted or tailored to desired creative or innovative processes in organisations (Binnewies & Gromer, 2012). Last, by focusing on the antecedents of OCB and IWB, this research guides managers on how to elicit these behaviours from employees, through inter alia, promoting appropriate leadership style, organisational justice, and employee commitment as necessary. This study can therefore assist managers to gain a competitive advantage in the present dynamic environment by encouraging employees to engage in discretionary, spontaneous and

change-oriented behaviours through the use of socially-embedded practices such as good leadership and fair treatment of employees.

1.5. Delimitation of scope and key assumptions

There have recently been some intriguing studies that discuss some negative effects of OCBs. For example, Vigoda-Gadot (2006, 2007) introduced the concept of 'compulsory citizenship behaviour' (CCB), and Coldwell and Callaghan (2014) introduced the concept of 'entropic citizenship behaviour' (ECB) respectively as involuntary and imbalanced forms of OCB that may have deleterious effects on performance criteria (Khaola & Coldwell, 2017*a*). Similarly, Anderson *et al*. (2014) has presented a review of studies revealing some dark sides of innovation. While the outcomes of extra-role behaviours, and indeed the dark side of extra-role behaviours is apparently an under-researched area, the current study focuses on the antecedents of these extra-role behaviours (Podsakoff *et al*., 2009), and will assume that they (OCB and IWB) are well-balanced, and have positive effects on organisational effectiveness, particularly task performance.

There has also been some debate on whether organisational citizenship behaviours are perceived as in-role or extra-role by employees (Chiaburu & Byrne, 2009; Coyle-Shapiro, Kessler, & Purcell, 2004; Kamdar, McAllister, & Turban, 2006; McAllister, Kamdar, Morrison, & Turban, 2007; Morrison, 1994; Tepper, Lockart, & Hoobler, 2001; Van Dyne, Kamdar, & Joireman, 2008; Vey & Campbell, 2004). While this debate merits attention too, the current study maintains the traditional view that there are conceptual differences between in-role and extra-role behaviours (Van Dyne *et al*., 1995).

The study was conducted in Maseru, the capital town of Lesotho. Being the capital city, Maseru was the only town in Lesotho with some

significant economic activity at the time of study, and was therefore considered the appropriate setting for the purposes of this study. Furthermore, many headquarters of organisations in Lesotho are located in Maseru. As aptly suggested by Yen and Niehoff (2004), researchers need to examine the international generalisability of behavioural relationships established in Western countries.

1.6. Conclusion

The two main performance criteria of interest in this study are OCB and IWB. There is however paucity of research on the relationships between these outcome variables (Xerri & Brunetto, 2013). Furthermore, the relationships between these criterion variables with leadership, fairness and commitment remain unclear. This study proposes and tests a model that links both leadership and fairness indirectly to IWB through the successive mediation of affective commitment and OCB. It is hoped that this new perspective will further stimulate the debate, clarify, and possibly resolve how both leadership and fairness relate to IWBs in organisations.

1.7. The outline of the study

The rest of this thesis is organised as follows. The next chapter briefly presents the literature review, and derives testable hypotheses from such literature. This is followed by the proposed research design, with emphases on methodologies to be followed in collecting data and analysing it. The fourth and fifth chapters respectively focus on the presentation of the main results and their discussion. The final section provides the conclusions.

CHAPTER 2
LITERATURE REVIEW AND HYPOTHESES

2.1. Introduction

The previous chapter provided an overview of OCB and IWB concepts and some unresolved issues with regard to their presumed antecedents; identified the research problem, aim and objectives; and detailed the significance of the present research. The aim of this chapter is to review the existing literature, and to derive testable hypothesis from such literature. The proposed conceptual model is shown in Figure 2.1. The model proposes IWB as a dependent variable; organisational commitment and OCB as possible sequential mediator variables; and leadership and organisational justice as related independent variables.

The chapter is organised as follows. First, the theoretical framework is introduced, and this paves the way for the derivation of hypotheses in later sections. After the theoretical framework, the study presents OCB and IWB concepts in detail, and how they relate to each other conceptually and empirically. These sections are followed by the sections which critically review the relationships between organisational commitment and extra-role behaviours (OCB and IWB); leadership and organisational commitment; organisational justice and organisational commitment; leadership and extra-role behaviours; and organisational justice and extra-role behaviours respectively. These relationships form the bases on which study hypotheses are formulated. The final section of the chapter is the conclusion.

2.2. Theoretical framework

The theoretical framework used in this study draws mainly from the Social Exchange Theory (SET), Job Demands-Resources (JD-R) Theory,

and in some cases, Social Identification Theory (SIT) and Cognitive Evaluation Theory (CET).

According to SET, employees engage in a series of interdependent and contingent actions that generate reciprocal exchange obligations, and overtime, high quality relationships (Blau, 1964; Cropanzano & Mitchell, 2005). Underlying this theory is the norm of reciprocity which posits that people assist and never harm those that assist them (Gouldner, 1960). This suggests that employees respond positively to favourable treatment, and negatively to unfavourable treatment from others (Cropanzano & Mitchell, 2005).

According to SIT, employees classify themselves into various social categories such as group membership, gender, age, race, etc. (Tajfel & Turner, 1989). This social classification facilitates social identification (perception of oneness with, or belonginess to some social group) (Ashforth & Mael, 1989; Khaola & Sebotsa, 2015). Since organisational commitment comprises organisational identification (a more specific form of social identification), it is theoretically possible that organisational commitment relates to attitudes and behaviours of people in organisations with which they strongly identify (Khaola & Sebotsa, 2015).

JD-R Theory posits that the employee's work environment is characterised by job demands and job resources. Demerouti, Bakker, Nachreiner and Schaufeli (2001: 501) have defined job demands as 'those physical, social, or organisational aspects of the job that require sustained physical or mental effort', and job resources as 'those physical, social, or organisational aspects of the job that may do any of the following: (a) be functional in achieving work goals; (b) reduce work demands and the associated physiological and psychological costs; and (c) stimulate personal growth and development'. Examples

of job demands include work overload, role conflict, and job insecurity; and examples of job resources include feedback, autonomy, and social support (Schaufeli & Taris, 2014). In the present context, supportive leadership and organizational justice can be viewed as resources that may facilitate work engagement, organizational commitment and engagement in extra-role behaviours. This theory is supported by CET which posits that contextual factors such as leadership and fairness respectively affect intrinsic motivation negatively and positively by means of controlling and providing information and support (Shalley, Zhou & Oldham, 2004). Intrinsic motivation refers to the extent to which an individual enjoys his/her work, and engages in it for its own sake (Deci & Ryan, 1985; Shalley *et al*., 2004), and it is important for fostering creative and innovative behaviour. The study concepts and their potential structural path relations are discussed from the right to the left of Figure 2.1. After reviewing the outcome constructs (OCB and IWB), the study delves deeper into their associations because there is little research done on such associations (Turnipseed & Turnipseed, 2013).

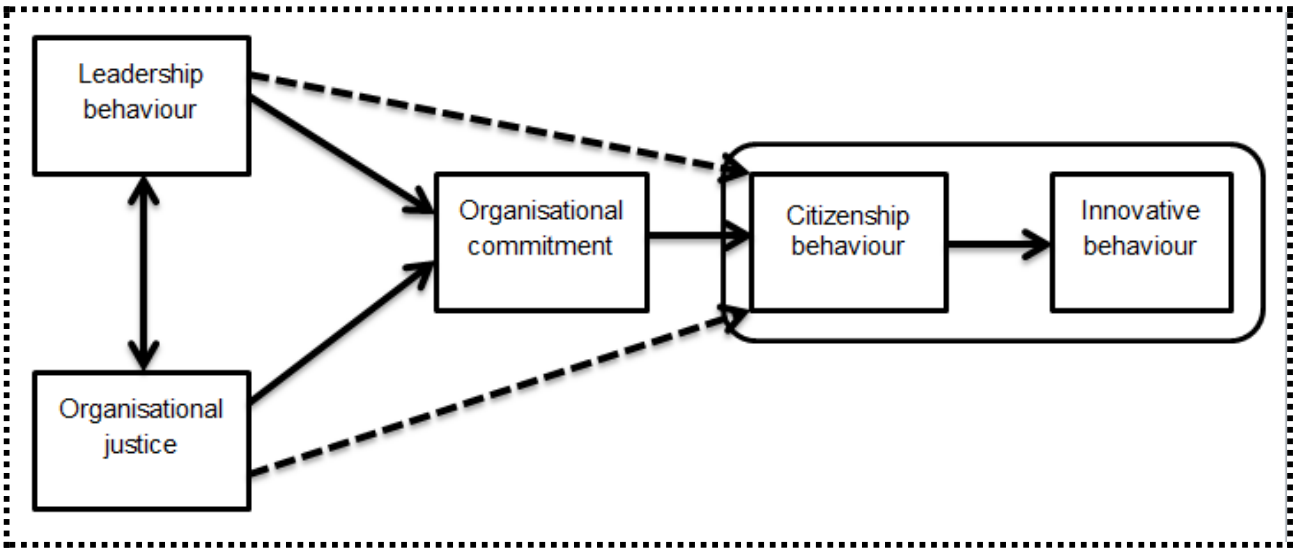

Figure 2.1: Hypothesised Model

2.1 The concept of citizenship

It is a widely held view that employees who engage in discretionary behaviours that exceed role requirements improve organizational effectiveness (Khaola & Coldwell, 2016). These behaviours are collectively known as citizenship behaviours. The best known and most rigorously researched citizenship behaviour is OCB (Organ *et al*., 2006; Podsakoff *et al*., 2009).

OCB was originally defined by Organ (1988: 4) as 'the behaviour that is discretionary, not directly or explicitly recognised by the formal reward system, and that in the aggregate promotes the effective functioning of the organisation'; but in alignment with Borman and Motowidlo's (1993) contextual performance, he (Organ, 1997:95) later aptly redefined it as total 'performance that supports the social and psychological environment in which task performance takes place'. Organisational citizenship behaviours include, among other behaviours, helping co-workers with work-related problems; communicating changes that may affect co-workers; participating in the governance of the organisation; promoting the image of the organisation to outsiders; being punctual; performing job duties to levels beyond expectations; refraining from complaining about trivial things; and making creative suggestions (Yen & Niehoff, 2004). These are behaviours which managers often expect, but cannot technically require from employees because they (behaviours) are not detailed in job descriptions (LePine, Erez, & Johnson, 2002).

Even though the term OCB was coined by Organ and colleagues in the 1980's (Smith, Organ, & Near, 1983; Bateman & Organ, 1983; Organ, 1988), management scholars have always understood the importance of 'spontaneous and cooperative' extra-role behaviours in the effective functioning of organisations. In the 1930's, Barnard (1938) realised

the need for organisational members to willingly cooperate for the good of the organisation. This idea was picked up by Katz (1964: 132) who wrote about the importance of cooperative behaviours that go beyond role requirements, arguing that an organisation that relies solely upon its blueprint of prescribed job behaviour is a 'fragile social system'. Katz (1964) and Katz and Kahn (1978) argued that organisations should have employees that engage in 'innovative and spontaneous' behaviours that go beyond prescribed job descriptions. In the 1980's, Organ and colleagues (Smith *et al*., 1983, Bateman & Organ, 1983; Organ, 1988) called these behaviours organisational citizenship behaviours.

In summary, organisational citizenship behaviours normally give organisations a competitive advantage. It has also been shown that many citizenship behaviours we understand today have the influence of the seminal work of Katz (Podsakoff *et al*., 2000).

One problem facing OCB researchers has however been that the number of citizenship-like extra-role behaviours in the literature has been increasing exponentially without clear integrative framework (Spitzmuller *et al*., 2008). To date little work has been done to empirically consolidate these seemingly disconnected literatures (Organ *et al*., 2006). For example, despite conceptually close relationships between OCB and IWB, there has surprisingly been little research designed to integrate these two constructs (Xerri & Brunneto, 2013).

The following sub-sections discuss two of the most popular integrative frameworks of citizenship behaviours in the literature.

2.1.1. OCB-I and OCB-O distinction

Although there have been many conceptualisations of OCBs, many researchers (e.g. Organ, 1997; Podsakoff *et al*., 2009; Spitzmuller *et al*., 2008) agree that the most popular framework is the one developed by Williams and Anderson (1991).

This simple, yet parsimonious framework is used to integrate many dimensions of OCB, and is probably one of the most stable frameworks that to-date underlie complex OCB models (Dalal, 2005). As shown in Table 2.1, this framework differentiates between OCB targeted at individuals (OCB-I or interpersonal aspects of OCB) and OCB targeted at organisations (OCB-O or impersonal aspects of OCB). Unlike other frameworks that rely on exploratory factor analysis to derive the components of OCB, Spitzmuller *et al*. (2008) observe that this framework is rooted on sound theory, and presumably permits the examination of the 'target-similarity effects' based on the target of OCB (Lavelle *et al*., 2009). The notion of 'target-similarity effects' in this context suggests that employees are more likely to direct their reciprocation efforts to either the organization or individuals depending on whether they respectively perceive the organization or individuals to be the source of their assistance (McNeely & Meglino, 1994). This suggests that attitudes and behaviours directed at the organisation would be more salient correlates of OCB-O than attitudes and behaviours directed at other people, and vice versa.

Table 2.1: Overlap of dimensions of OCBs

AUTHOR (S)	**DIMENSIONS**		
Williams & Anderson (1991)	**OCB-I**	**OCB-O**	**Other**

Smith, Organ & Near (1983)	Altruism	General Compliance	
Organ (1988)	Altruism, Courtesy	Conscientiousness, civic virtue, sportsmanship	
Organ (1990)	Altruism, courtesy, peacekeeping, cheerleading	Compliance, civic virtue, sportsmanship	
Graham (1989)	Interpersonal helping	Organizational loyalty	
Van Scotter & Motowidlo (1996)	Interpersonal facilitation	Job dedication	Job dedication
Farh, Early & Lin (1997)	Helping co-workers (altruism), interpersonal harmony	Conscientiousness, civic virtue, protecting company resources	
Borman & Motowidlo (1993, 1997)		Endorsing, supporting, defending organizational goals	
Van Dyne & LePine (1998)	Helping	Voice behaviour*	
Morrison and Phelps (1999)		Taking charge* (individual initiative)	
Farh, Zhong & Organ (2004)	Interpersonal harmony, helping	Promoting company's image, voice*, taking initiative*, group	Self-training, keeping workplace

	coworkers	activity participation	clean, social welfare participation
Van Dyne *et al*. (1994)	Social participation	Loyalty, obedience, conscientiousness	Functional participation
Coleman & Borman (2000)	Interpersonal citizenship behaviour	Organizational citizenship behaviour	Job-task citizenship behaviour
McNeely & Meglino, 1994	Prosocial individual behaviour	Prosocial organizational behaviour	Role-prescribed behaviour
Coldwell & Callaghan, 2013	Personal support behaviour	Organisational support behaviour	
Morrison (1994)	Altruism	Conscientiousness, sportsmanship, involvement, keeping up with changes*	
Moorman & Blankely (1995)		Loyal boosterism, personal industry, individual initiative*	

Source: *Compiled by the researcher from the literature. * Dimensions with conceptual overlap with IWB.*

As shown in Table 2.1, many OCBs can be classified as either OCB-I or OCB-O. Selected examples illustrate this point.

Smith *et al*. (1983) proposed two dimensions of OCB – altruism reflecting aspects of OCB-I, and generalized compliance reflecting the aspects of OCB-O. Later Organ (1988) proposed a five-model framework comprising altruism, courtesy, conscientiousness, civic virtue, and sportsmanship. The first two dimensions capture interpersonal aspects of OCB (i.e. OCB-I) and the latter three

dimensions capture the impersonal aspects of OCB (i.e. OCB-O) (Podsakoff *et al*., 2009).

Examples of other dimensions of OCB benefiting individuals (OCB-I) include Graham's (1989) interpersonal helping; Van Scotter and Motowidlo's (1996) interpersonal facilitation; Farh, Early and Lin's (1997) altruism and interpersonal harmony; Van Dyne and LePine's (1998) helping; Farh, Zhong and Organ's (2004) helping co-workers and interpersonal harmony; Van Dyne *et al*.'s (1994) social participation; Coleman and Borman's (2000) interpersonal citizenship behaviour; McNeely and Meglino's (1994) prosocial individual behavior; Coldwell and Callaghan's (2014) individual support; and Morrison's (1994) altruism.

Other pertinent dimensions of OCB directed at organisations (OCB-O) include Graham's (1989) organizational loyalty; Van Scotter and Motowidlo's (1996) job dedication; Farh *et al*.'s (1997) conscientiousness, civic virtue, and protecting company resources; Borman and Motowidlo's (1993, 1997) endorsing, supporting, and defending organizational goals; Van Dyne and LePine's (1998) voice behaviour; Morrison and Phelps' (1999) taking charge; Farh *et al*.'s (2004) promoting company's image; Van Dyne, Cummings and Parks' (1994) loyalty, obedience, and conscientiousness; Coleman and Borman's (2000) organizational citizenship behaviour; McNeely and Meglino's (1994) prosocial organisational behaviour; Coldwell and Callaghan's (2014) organisational support; Morrison's (1994) conscientiousness, sportsmanship, involvement, and keeping up with changes; and Moorman and Blankely's (1995) loyal boosterism, personal industry, and individual initiative.

A few dimensions that do not fit squarely within the broad dimensions proposed by Williams and Anderson (1991) include Van Scotter and

Motowidlo's (1996) job dedication; Van Dyne *et al*.'s (1994) functional participation; Farh *et al.*'s (2004) self-training, keeping workplace clean, social welfare participation; and Coleman and Borman's (2000) job-task citizenship behaviour.

In summary, Table 2.1 suggests that organisational citizenship behaviour is best viewed as a latent construct consisting *of at least two manifest and imperfect indicators* (OCB-I and OCB-O), and this is supported by some empirical and theoretical studies.

This popular framework can however be challenged on at least three grounds. First, there are persuasive meta-analytic studies indicating that OCB dimensions may be so closely related that the construct is best viewed as a single latent factor (e.g. Hoffman *et al*., 2007; LePine *et al*., 2002), and not the ones suggested by the model. Second, the framework was derived based mainly on affiliative OCBs. While problematic, this is not surprising because the majority of published studies have focused on affiliative OCBs, and only recently has the research started acknowledging the importance of OCBs that fall under the realm of change-oriented and proactive OCBs (e.g. Bettencourt, 2004; Choi, 2007; Chiaburu, Oh, Berry, Li, & Gardner, 2011). While change-oriented OCBs admittedly have features of OCB-O, the core issue here is that the Williams and Anderson's (1991) framework was not derived based on change-oriented OCBs. Third, the meta-analytic study by Dalal (2005: 1247) has suggested that the target-referent of behaviour (OCB-I or OCB-O) may not be as important as we are made to believe. In support of this view, Harari, Reaves, and Viswesvaran (2016) indicated that their evidence did not support the expectation that the relationship between creative and innovative performance and other forms of performance was moderated by the target of OCB. In similar vein, Podsakoff *et al*. (2009) found little support of the effects

of OCB target on individual level outcomes. Furthermore, in consideration of a nomological network of affiliative and change-oriented OCBs, Chiaburu *et al*. (2011:1149) posit that prosocial versus proactive distinction (their version of affiliative versus change-oriented distinction) seems a more potent citizenship classification than other frameworks (e.g. OCB-I versus OCB-O). The potency of the key distinction between affiliative OCBs (e.g. helping OCB) and change-oriented OCB has been echoed by Podsakoff *et al*. (2009) and MacKenzie, Podsakoff and Podsakoff (2011*a*).

Even though the affiliative versus change-oriented distinction (or variation thereof) has not been given the attention it deserves, this study considers both frameworks for a better explication of OCB categories.

2.1.2. Affiliative and change-oriented distinction

The concept of OCB as conceived by Organ (1988) is primarily affiliative in nature. In other words, it focuses on modest behaviours that sustain the status quo (Marinova, Moon, & Van Dyne, 2010; Morrison & Phelps, 1999). Other citizenship behaviours, including taking charge, personal initiative, voice, innovative work behaviour and other proactive OCBs, are change-oriented in nature (Bettencourt, 2004; Choi, 2007).

Since many examples of affiliative OCBs are more likely to maintain good working relations than change-oriented OCBs such as voice or creative behaviour, the two forms of OCBs are likely to be conceptually related, but distinct. The meta-analytic study by Chiaburu *et al*. (2011) supports this view. Similarly, MacKenzie *et al*. (2011*a*: 561) have argued that affiliative and change-oriented OCBs are conceptually and empirically distinguishable because they fall on separate factors and have different antecedents.

However, as extra-role behaviours, affiliative and change-oriented OCBs also overlap. In a recent narrative review, Potoňik and Anderson (2016) posited that most change-oriented constructs, just like OCB, are discretionary, and with the exception of innovation, creativity and submitting suggestions which can also be formally required, they include extra-role elements. Table 2.2 presents definitions of selected affiliative and change-oriented OCBs.

Table 2.2: Conceptual definitions of selected OCBS

Dimension	Definition	Source/author/s
Altruism	Employee voluntary actions that help another employee with work task or problem	Smith *et al*., 1983; Organ, 1988; Podsakoff *et al*., 1990
Courtesy	Employee discretionary behaviour aimed at preventing work-related problems with others	Organ, 1988; Podsakoff *et al*., 1990
Civic virtue	Behaviour indicating that an employee actively participate in, is involved, and is concerned about the life of the organisation	Organ, 1988; Podsakoff *et al*., 1990
Conscientious-ness (a.k.a. compliance)	Employee discretionary behaviour that goes beyond minimum role requirements, including in areas of attendance, obedience and adherence to rules, regulations and procedures	Smith *et al*., 1983; Organ, 1988; Podsakoff *et al*., 1990
Sportsmanship	Willingness of an employee to tolerate less than ideal circumstances without complaining and/or making problems seem greater than they really are	Organ, 1988; Podsakoff *et al*., 1990

Taking charge	Extra-role behaviour that entails voluntary and constructive efforts by individual employees, to effect organisationally functional change with respect to how work is executed within the contexts of their jobs, work units, or organisations	Morrison and Phelps, 1999:403
Voice behaviour	A promotive behaviour that emphasises expression of constructive challenge intended to improve rather than merely criticize. Voice is making innovative suggestions for change and recommending modifications to standard procedures even when others disagree	Van Dyne and LePine, 1998: 109
Personal initiative	Work behaviour characterised by its self-starting nature, its proactive approach and by being persistent in overcoming difficulties that arise in the pursuit of a goal	Frese & Fay, 2001:134; Frese *et al*., 1997
Innovative work behaviour	The intentional creation, introduction and application of new ideas within a work role, group or organisation, in order to benefit role performance, the group, or the organisation	Janssen, 2000:288; 2004:202

Source: *Compiled by the researcher from the literature.*

In addition to the target of OCB (interpersonal versus organisational) discussed above, Moon, Van Dyne and Wrobel (2004) proposed a more concrete integrative model of OCBs with two additional axes (promotive versus protective), resulting into four quadrants. This model is shown in Figure 2.2.

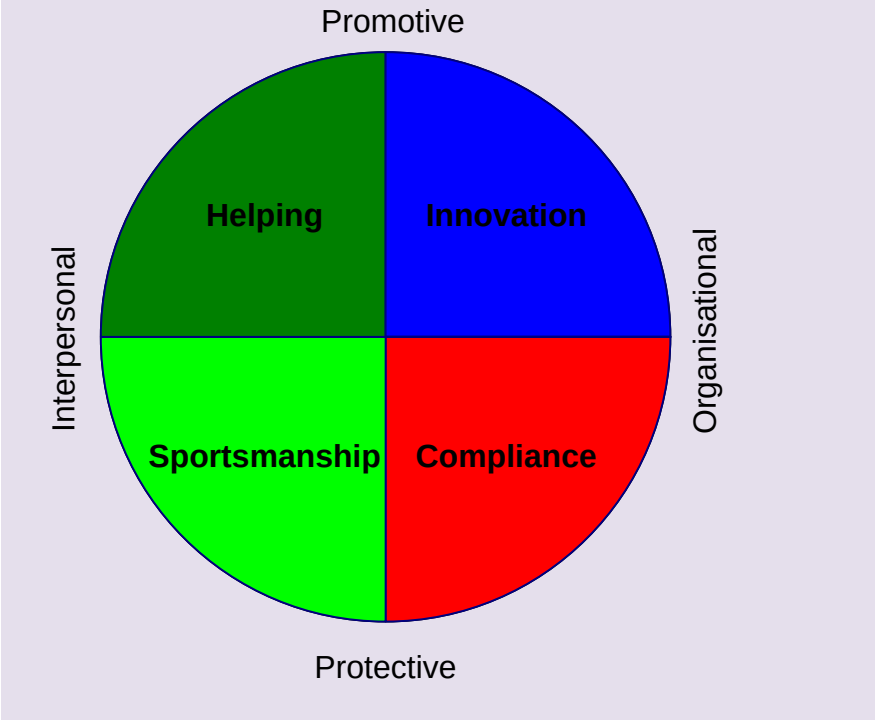

Figure 2.2: Circumplex Model of OCB: Axes and representative behaviours

Source: Adapted from Moon, H., Van Dyne, L., & Wrobel, K. (2004). The cirumplex model and the future of Organisational citizenship behaviour research, p.5. In Turnipseed, D. L. (ed), *Handbook of Organisational Citizenship Behaviour: A Review of 'Good Soldier' Activity in Organisations*, 1-22, New York: Nova Science Publishers Inc.

Based on this model, four representative behaviours can be identified - helping behaviour which is interpersonal and promotive, innovation which is organisational and promotive, compliance which is organisational and protective, and sportsmanship which is interpersonal and protective. Marinova *et al*. (2010) tested this model, and largely found support for the different dimensions of OCB.

Moon *et al.*'s (2004) model is appealing because it highlights the importance of change-oriented OCB (Bettencourt, 2004; Choi, 2007) such as IWB (Janssen, 2000, 2004) in addition to affiliative OCBs (Marinova, Peng, Lorinkova, Van Dyne, & Chiaburu, 2015). If it is

considered that this model superimposes change-oriented OCB on affiliative OCBs (OCB-I and OCB-O as indicated above), while more elaborate, it is not entirely different from the superimposition of the pro-social versus proactive distinction suggested by Chiaburu *et al*. (2011).

In summary, affiliative and change-oriented OCBs are related but different. Thus in addition to OCB-I and OCB-O distinction, the other distinction of affiliative versus change-oriented OCB is adopted as another framework of integrating OCBs, and IWB is used as an example of change-oriented OCB in this study.

2.2. The concept of IWB

Compared to the literature on creativity and innovation, the literature on IWB is relatively new and less developed. De Spiegelaere (2014) suggests that IWB expresses innovation in form of work behaviour, and is often associated with the pioneering work of Scott and Bruce (1994, 1998).

Many cited definitions of IWB have a strong influence of the seminal work of West and Farr (1990:9) on innovation. These authorities defined innovation as 'the intentional introduction and application, within a role, group or organisation of ideas, processes, products and procedures, new to the relevant unit of adoption, designed to significantly benefit the individual, the group, organisation or wider society' (p.9). Predicated on this seminal work, Janssen (2000: 288; 2004: 202) has defined IWB as 'the intentional creation, introduction and application of new ideas within a work role, group or organisation, in order to benefit role performance, the group, or the organisation'. Similarly, Carmeli, Meitar and Weisberg (2006: 78) have defined innovative behaviour as 'a multi-stage process in which an individual recognises a problem for which she or he generates new (novel or

adopted) ideas and solutions, works to promote and build support for them, and produces an applicable prototype or model for the use and benefit of the organisation or parts within it.'

Common to all definitions is that IWB focuses on behaviour as it relates to innovation, and like its parent concept of innovation, it is a multi-stage process that includes creativity (production of novel and useful ideas) and innovation (idea championing and idea implementation) (Anderson *et al*., 2014; De Spiegelaere, 2014). Furthermore, creative ideas can be generated by employees in any job, and at any level of the organisation (Baer, Oldham, & Cummings, 2003).

The term IWB also overlaps with other concepts, including creativity, innovation, intrapreneurship, and related to this study, change-oriented organisational citizenship behaviours such as personal initiative, voice behaviour and taking charge (De Spiegelaere, 2014). IWB is however complexly related to these concepts because even though it is discretionary, it has some elements that are in-role and extra-role in nature (Tuominen, & Toivonen, 2011).

Looking closely at Table 2.1, IWB is likely to overlap with dimensions of OCB that are proactive or change-oriented, and directed at the organisation (Choi, 2007). However, as extra-role citizenship behaviour, IWB has not received as much attention as other proactive OCBs like voice, personal initiative and taking charge. In particular, there has been limited research on the relationship between OCB and IWB (Turnipseed & Turnipseed, 2013; Xerri & Brunneto, 2013).

2.2.1. Facets of IWB

It is generally acknowledged that IWB is a multi-stage and multi-dimensional behavioural construct that entails both creativity

(production of novel and useful ideas) and innovation (implementation of ideas) (Anderson *et al*., 2014; De Jong & den Hartog, 2010; Reuvers, van Engen, Vikenburg, & Wilson-Evered, 2008; Scott & Bruce, 1994). Figure 2.3 shows a visual representation of common dimensions of IWB reported in the literature.

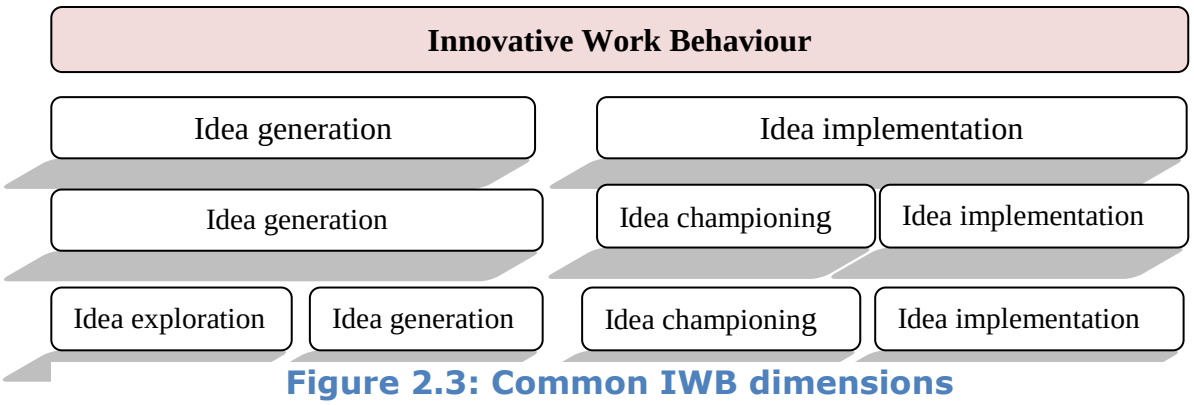

Figure 2.3: Common IWB dimensions

Source: Adapted from De Spiegelaere, S. (2014). The employment relations and innovative work behaviour. Unpublished PhD thesis, downloaded on May 1, 2015 from http://www.researchgate.net/publication/265421090_The_Employment_Relationship_and_Innovative_Work_Behaviour, p. 50

As shown in Figure 2.3, theoretical dimensions of IWB range from 1 to 4; with some studies reporting up to 5 dimensions (De Spiegelaere, 2014). While the first row represents two dimensions (idea generation and idea implementation); the second row represents three dimensions (idea generation, idea championing and implementation); and the third row represents four dimensions (idea exploration, idea generation, idea championing, and idea implementation). This figure should however be understood in the broader context of studies showing actual dimensions derived from practice. The sample of practical studies focusing on the dimensions of IWB is summarized in Table 2.3.

Table 2.3: Dimensions of IWB

Study	# of items and dimensions	Internal Reliability (α)
Scott & Bruce (1994)	6 items; one dimension	0.89
Bunce & West (1995)	5 items; one dimension	Sample 1: 0.75; Sample 2 : 0.80
Spreitzer (1995)	4 items; one dimension	0.91
Basu & Green (1997)	4 items; one dimension	0.93
Scott & Bruce (1998)	4 items; one dimension	Sample 1: 0.86; Sample 2: 0.84
Janseen (2000)	9 items; one dimension	Self-ratings: 0.95; supervisor rating: 0.96
Kleysen & Street (2001)	14 items; one dimension	0.97
Krause (2004)	8 items; two dimension (5 items on *creativity* and 3 on *implementation)*	0.78 and 0.81 respectively
Dorenbosch, van Engen & Verhagen (2005)	16 items; two dimensions (10 items on *creativity* and 6 on *implementation*)	0.90 and 0.88 respectively
Carmeli *et* al. (2006)	12 items; two dimensions (self-rating and supervisor rating dimensions)	0.87 supervisor rating; 0.86 self-rating

Reuvers *et al*. (2008)	4 items; one dimension	0.86
De Jong & den Hartog (2010)	10 items; 4 dimensions (2 items on *idea exploration*, 3 on *idea generation*, 2 on *idea championing*, and 3 on *idea implementation*)	0.88, 0.90, 0.95 and 0.93 respectively. Dimensions so closely related that authors argue they combine additively to create overall IWB scale

Source: Adapted from De Jong, J. & den Hartog, D. (2010). Measuring innovative work behaviour. *Creativity and Innovation Management*, 19(1), p. 26.

As shown in Table 2.3, even though IWB is often conceptualized as a concept comprising between two and three dimensions (idea generation, idea promotion and idea implementation), due to high inter-correlations among these dimensions, some empirical studies aggregate these components additively to create one overall scale of IWB (e.g. Janssen, 2000, 2004; de Jong & den Hartog, 2010). De Spiegelaere (2014) found that out of 31 studies reviewed, only 7 managed to empirically distinguish between these theoretical dimensions. Following this pattern of findings, this study focuses on one summative scale of IWB, with supplementary analyses on creativity and innovations dimensions where necessary.

In relation to these dimensions, existing literature suggests that most creativity research has been at the individual level, while most of innovation research has been at the team and organisation levels (Anderson, Potočnic, Hülsheger, & Rosing, *in press*). The present study analyses creativity, innovation and the aggregate measure of the two dimensions (IWB) at the individual level. It is submitted that this nuanced approach is necessary for theory development and practical implications, especially because individual creativity forms the

foundation for team and organisational creativity and innovation (Shalley & Gilson, 2004).

Having reviewed the nature and contents of OCB and IWB separately, the next section provides the conceptual and empirical relationships between these two constructs.

2.3. Organisational citizenship and innovative work behaviours

There is a broad consensus that organisational performance is a multi-dimensional construct around which many studies in management research revolve (Viswesvaran & Ones, 2000). In a recent study, Harari *et al*. (2016) cited task performance, OCB and counterproductive work behaviours (CWB) as the most rigorously researched dimensions of performance; but they also added adaptive behaviour, knowledge transfer, and creative and innovative performance (CIP) as emerging dimensions of performance which are necessitated by, among other forms of new business landscape, the dynamic nature of jobs; the knowledge economy; and the critical importance of individual creativity and innovation.

As indicated in previous sections, many streams of literature have enriched our understanding of OCB (e.g. Organ & Ryan, 1995; Hoffman, Blair, Meriac & Woehr, 2007; LePine *et al*., 2002; Podsakoff *et al*., 2000; Podsakoff, Whiting & Podsakoff, 2009; Spitzmuller, Dyne, & Ilies, 2008) and IWB *(*e.g. Anderson *et al*., 2014; Janssen, 2000; Reuvers, van Engen, Vinkenburg, & Wilson-Evered, 2008; Scott & Bruce, 1994). However, the research on the relationships between these dimensions of performance is limited (Xerri & Brunneto, 2013).

2.3.1. The conceptual relationship between OCB and IWB

Many researchers define both OCB and IWB as discretionary and extra role behaviours (De Spiegelare, 2014; Dorenbosch *et al*., 2005;

Janssen, 2000; 2004; Reuvers *et al*., 2008). This is because both behaviours are discretionary, and while they may be expected, they are not detailed in employee job descriptions. For instance, following the classical definition of Organ (1988), Janssen (2000: 288) indicated that IWBs are discretionary extra-role behaviours which go 'beyond prescribed role expectations, and are not directly or explicitly recognised by the formal reward system'. Similarly, Turnipseed and Turnipseed (2013) described IWB as the wide range of spontaneous, discretionary and co-operative behaviours that are within the purview of OCB. As posited by Rank *et al*. (2009: 467), IWB and task (in-role) performance are conceptually different because the latter does not necessarily involve novel ideas, while the former may sometimes encompass voluntary behaviours that fall within the domain of citizenship behaviours.

The influential study by Podsakoff *et al*. (2000: 516) has been particularly useful in helping researchers to situate both affialitive OCBs and change-oriented OCBs in the broader context of extra-role citizenship behaviours in general; and pertinent to this study; OCB and IWB in particular. They found that about 30 forms of OCB existed at the time of their study; and that *individual initiative* was an important component of OCB.

Individual initiative is the dimension that arguably most resembles IWB, and includes 'voluntary acts of creativity and innovation designed to improve one's task or organisational performance' (Podsakoff *et al*., 2000: 516). The person with personal initiative behaviour is described as a proactive self-starter who persists in the face of adversities in pursuit of goals (Frese & Fay, 2001). Another citizenship-like behaviour that resembles IWB is called '*taking charge'*, and is described by Morrison and Phelps (1999: 403) as entailing 'voluntary

and constructive efforts, by individual employees, to effect organisationally functional change with respect to how work is executed within the context of their jobs, work units, or organisations'.

While the above definitions have situated IWB within the domain of extra-role citizenship behaviours, the emerging evidence suggests that IWB is neither fully task performance nor fully OCB because it is ambiguously related to both dimensions of work performance (Harari *et al*., 2016). In this regard, the qualitative study by Tuominen and Toivonen (2011) has been instructive in the sense that it found that IWBs had elements of both task performance and OCB. Referring to a concept with similar features to IWBs, Podsakoff *et al*. (2000: 524) comment that 'whether or not individual initiative is extra-role is a matter of judgment because it differs more in degree than in kind from in-role behaviour'.

In summary, what emerges from the literature is that OCB and IWB are related but different, and the latter is associated with change-oriented or proactive dimensions of the former. In terms of Williams and Anderson's (1991) classification, IWB is likely to be classified as OCB-O; and in terms of the emerging classification of pro-social versus proactive OCBs (Chiaburu *et al*., 2015), and affiliative versus change-oriented OCBs (Bettencourt, 2004; Choi, 2007), it is likely to fall within the domain of change-oriented OCBs.

Surprisingly, as indicated in previous sections, there is little empirical research on the relationships between OCB and IWB (Turnipseed & Turnipseed, 2013; Xerri & Brunneto, 2013). This is problematic because for any new social science concept to add value, it should be shown that it is sufficiently different from existing concepts. For instance, the new concept should not predict or being predicted by frameworks in existence in other related concepts (Organ *et al*., 2006;

Shane & Venkataraman, 2000). This is what should be expected of IWB if it is a distinct construct from related constructs such as OCB. The separate development of literatures in these concepts is problematic for at least one other unintended consequence - researchers run the risk of developing streams of literature that may not prove useful in the field of management in the long run if these concepts later prove to be redundant (Van Dyne *et al.,* 1995).

One of the major goals of this study is to evaluate the convergent and discriminant validities of OCB and IWB.

2.3.2. Causal ordering or temporal relationship between OCB and IWB

The existing literature often conceptualises OCB as a predictor of IWB (Xerri & Brunneto, 2013). This causal ordering has some face validity.

Affiliative OCBs help maintain relationships within existing cooperative systems, and in the view of Harari *et al*. (2016), OCBs help build social capital (strong relationships shared among employees) that may facilitate creative and innovative performance (IWB). The social relationships emanating from OCB are also important for perspective taking among employees, and the trust bred by these relationships between employees and supervisors signal to employees that the environment is safe and supportive. Safe and supportive environments are logically required for risk-taking, intrinsic motivation, and above all, idea generation (Anderson *et al*., 2014; Shalley *et al*., 2004).

Furthermore, since IWB involves 'selling' of creative ideas to others (Janssen, 2000), the social capital created by affiliative OCBs is important for innovation (idea support and implementation). In support of the importance of social capital in creativity and innovation, Chen, Zhang, Yang and Bai (2016) found that social capital mediated the relationship between leadership and organisational innovation.

Another support for causal ordering between OCB and IWB is suggested by the pro-social motivation that underlies OCB. The work of Liu, Jiang, Shalley, Keem, and Zhou (2016) brought together three primary motivational mechanisms underpinning creative work – intrinsic motivation (Amabile & Pillemer, 2012); creative self-efficacy (Bandura, 2001, Tierney & Farmer, 2002); and pro-social motivation (Grant, 2008). Pro-social motivation is one's desire to expend effort in order to benefit other people (Grant, 2008; Liu *et al*., 2016). Since pro-social behaviours like OCB are natural outcomes of pro-social motivation (Liu *et al*., 2016), it stands to reason that OCB may precede IWB. Along these lines Liu *et al*. (2016) found that the pro-social motivation mediated the relationship between leadership and organisational innovation.

In summary, the present study posits that OCBs underlie the performance of IWBs.

2.3.3. Empirical relationship between OCB and IWB

Even though little research has been done on the relationship between OCB and IWB, the meta-analytic study by Harari *et al* (2016) has given us insights into the possible empirical relationships. First, Harari *et al*. (2016) have argued persuasively that the two concepts are dimensions of performance, and OCB is the possible predictor of IWB. Second, Harari *et al*. (2016) found the correlation of 0.56 between the two constructs, suggesting again that that the two concepts are related, but distinct from each other.

Other empirical studies that support the relationship between OCB and IWB include the works of Xerri and Brunneto (2013), and Khaola and Coldwell (2016), who respectively found small and moderate, but significant correlations of 0.19 and 0.38 between OCB and IWBs.

On the bases of existing theoretical and empirical findings, the association between OCB and IWB can therefore be expressed as follows:

Hypothesis 1: There is a positive relationship between OCB and IWB

Having reviewed the conceptual and empirical relationships between OCB and IWB, the next section reviews the relationships between organisational commitment and OCB, followed by the section that reviews the relationships between organisational commitment and IWB.

2.4. Organisational commitment and OCB

Organizational commitment has been described as 'one's emotional attachment to, identification with, and involvement in a particular organization' (Meyer & Allen, 1991:67). It is often conceptualised as a construct reflected in the belief and acceptance of organisational goals and values, willingness to work hard on behalf of the organisation, and a desire to remain in the employment of the organisation (Mowday, Porter, & Steers, 1982). According to Meyer and Allen (1991), organisational commitment is a multi-dimensional construct comprising of affective commitment (one's emotional attachment to the organisation), continuance commitment (one's awareness of the costs associated with leaving the organisation), and normative commitment (one's feeling of obligation to remain in the employment of the organisation). This study adopts affective commitment because this dimension has previously demonstrated higher predictive validity than calculative commitment (Mathieu & Zajac, 1990).

One important axiom of attitude-behaviour framework is that attitudes such as organisational commitment should influence behaviours such as OCB. This is because people who feel emotionally attached to the

organisation should plausibly go an extra-mile on behalf of the organisation. Several theories support this axiom.

First, SET posits that affective commitment can be viewed as an attitudinal indicator of the extent to which employees perceive themselves to be in high quality social exchange relationships with their organisations (Cropanzano & Mitchell, 2005; Lavelle *et al*., 2009). Thus in exchange for support (e.g. leadership support) or fair treatment (e.g. procedural justice) from their organisations, employees may exhibit commitment, which in turn may prompt them to engage in citizenship behaviours because they feel an obligation to engage in such behaviours.

Second, as suggested by SIT, employees form identities around their organisations. As employees start to form their social and relational identities around their organisations, according to Group Engagement Model (Blader & Tyler, 2009), their attitudes and behaviours are primarily influenced by the sense of oneness with their organisations. Put differently, employees who have formed strong social and relational identities with their organisations may become intrinsically motivated to facilitate the success of their organisations (Blader & Tyler, 2009), and one way of safeguarding the success of the organisation is to engage in extra-role citizenship behaviour (OCB) on behalf of the organisation. According to Ashforth and Mael (1989), employees assist the organisation because they integrate their self-concept into the values of their organisations, and hence think of the success of their organisations as their own; in other words, meeting the goals of their organisations is tantamount to meeting their own goals. Integrating SET and SIT, Blader and Tyler (2009) have posited that 'employees may engage in OCB as a way of reciprocating (and

maintaining) the organisation's fulfilment of their social-identity-related-needs' (Khaola & Sebotsa, 2015:69).

Empirical studies broadly support a consistent relationship between affective commitment and OCB (Hoffman, Blair, Meriac, & Woehr, 2007). For instance, meta-analytic studies by Podsakoff *et al*. (2000) and Organ and Ryan (1995) respectively reported consistent effects of organisational commitment on OCB. Also, Coyle-Shapiro, Kessler and Purcell (2004) found that organisation commitment directly affected OCB. Similar pertinent effects were reported by Lehmann-Willenbrock, Grohmann and Kauffeld (2013).

In summary, this study expects the positive relationship between organisational commitment and OCB.

Hypothesis 2: There is positive relationship between organisational commitment and OCB

However, as elaborated in subsequent sections of this thesis, this relationship has been challenged by some scholars, especially where organisational commitment is studied concurrently with organisational justice (See figure 2.1). The doubt cast by some earlier studies on this relationship calls for more empirical studies in different contexts that evaluate this relationship while controlling for the relationship between organisational justice and OCB.

2.5. OCB as a mediating variable in the relationship between organisational commitment and IWB

Since IWB is a form of extra-role behaviour (Janssen, 2000; 2004), the assumptions of SET and SIT used above to account for the possible relationship between organisational commitment and OCB can be invoked to explain the possible relationship between organisational commitment and IWB. For instance, Agarwal (2014) found that work

engagement (variant of organisational commitment) directly affected IWB. In practice however, the relationship between organisational commitment and IWB may be small or insignificant.

Researchers have aptly posited that traditional job attitudes such as organizational commitment and job satisfaction may be less effective drivers of change-oriented and innovative behaviours because employees may feel strong attachment to the status quo; resulting in apparent failure to perceive opportunities for improvement (Marinova, *et al.*, 2015). Furthermore, Mumford *et al*. (2002:721) suggests that creative people are motivated, and therefore there is no need for employers to motivate them to be creative. They assert:

> *'By virtue of autonomy, professional focus, intrinsic motivation, and critical orientation, the leader of creative people cannot rely on position power, conformity pressure, and organizational commitment as a vehicle of directing work'* (Mumford *et al*., 2002:712).

Jaros (2010) suggests that unless employees perceive the proposed change to be consistent with organisational values, they may not be committed to such change, and in this case, they may not introduce innovative ideas.

Based on the above persuasive arguments, despite the predictions of SET and SIT, the direct relationship between organisational commitment and IWB may be difficult to ascertain. Though this study evaluates this relationship, no specific hypothesis is proposed on it.

This study posits instead that whatever relationship exists between organisational commitment and IWB is indirect. It can for instance, be mediated by OCB as shown in Figure 2.1.

IWB is risky because employees who introduce new ideas often challenge and sometimes even violate established systems and habitual actions (Agarwal, 2013; Gao, Janssen, & Shi, 2011; Janssen, 2004; Zhou & George, 2001). In order for employees, especially committed ones, to challenge and violate existing norms, the environment should be conducive for risk-taking. Since OCB is an affiliation-oriented behaviour that supports the social and psychological environments in which performance takes place (Organ, 1997); OCB should plausibly facilitate risk-taking endeavours of committed employees as well. Zhou and George (2001) found that dissatisfied employees with high continuance commitment are likely to be creative when they receive help, support and useful feedback from co-workers, or when they receive organisational support for creativity. Useful feedback and co-worker helping and support are consistent with what this study conceptualises as OCB-I.

Therefore, this study proposes OCB as an intervening variable between organisational commitment and IWB.

Hypothesis 3: OCB mediates the relationship between organisational commitment and IWB.

2.6. Leadership and organisational commitment

Leadership has been defined as a process by which a person influences a group or individuals to achieve a common goal (Hailey, 2006; Yukl, 2012).

The influence of leadership on work attitudes and behaviours has always intrigued management researchers. In the 1970's the focus was on behavioural theories, but in the late 1980's the focus shifted to transformational and transactional leadership theories (Bass, 1985;

Yukl, 1999); the theories which still dominate the leadership inquiries even today (Antonakis & House, 2014).

Transformational leadership encompasses the four interrelated behavioural dimensions of *inspirational motivation* (articulating an inspiring vision); *intellectual stimulation* (encouraging followers question old assumptions, and to be creative in solving problems); *individualised consideration* (understanding the needs of followers, and mentoring them to reach their full potential); and *idealised influence* (charismatic role modelling). Transactional leadership comprises of the three interrelated behaviours of *contingent-reward* (promising rewards for good performance); *active management by exception* (searching for deviations from rules and standards and taking corrective action); and *passive-avoidant* or *passive management by exception* (intervening only if standards are not met) (Jung, Chow & Wu, 2003; Rank *et al*., 2009).

According SET, employees who perceive high quality leadership from agents of the organisation (managers) can reciprocate by exhibiting commitment to the organisation. Similarly, JD-R Theory holds that leadership is a psychological job resource that can facilitate employee intrinsic motivation, work engagement and organisational commitment.

Even though the above theories make sensible predictions, empirical studies on the relationship between leadership and organisational commitment have sometimes provided inconsistent results. For instance, while Strauss, Griffin and Rafferty (2009) found some moderate relationship between leadership and employee commitment to their organisations, Podsakoff, McKenzie and Bommer (1996) could only find a significant positive relationship between articulating a vision dimension of transformational leadership and organisational

commitment. Along similar lines, based on leadership dimensions identified in the GLOBE studies (Global leadership and organisational effectiveness programme), Steyrer, Schiffinger, and Lang (2008) largely found support for the positive relationship between charismatic/values-based leadership, team-oriented leadership, participative leadership, humane-oriented leadership, and the negative relationship between self-protective leadership and organisational commitment.

In summary, most studies at least suggest that charismatic, values-based, inspirational, or articulating vision dimensions of leadership are potent predictors of organisational commitment.

It is worth noting that past studies have sometimes failed to replicate the full-range leadership model described above (consisting of transformational and transactional leadership), due to, among other things, high correlations among transformational leadership dimensions (Purvanova, Bono, & Dzieweczynki, 2006), and the fact that positive reward behaviour factor sometimes loads on transformational leadership factor (Yukl, 1999: 287). As a result, the association between active constructive leadership (comprising of transformational leadership and contingent-reward leadership), transformational leadership, and contingent leadership (Avolio, Bass & Jung, 1999) and other constructs should be examined to get nuanced relationships illustrated in Figure 2.1.

In aggregate, this study hypothesises the positive relationship between leadership and organisational commitment.

Hypothesis 4: There is a positive relationship between leadership and organisational commitment.

2.7. Organisational Justice and organisational commitment

Organisational justice or fairness expresses one's perceptions of fairness of outcome distribution (Adams, 1965); fairness of processes and procedures that underlie outcome decision (Leventhal, 1980; Thibaut and Walker, 1975); and fairness of interpersonal treatment and provision of accurate information during enactment of procedures (Bies and Moag, 1986).

Drawing from SET, the norm of reciprocity posits that employees may reciprocate good or fair treatment by being committed to the organisation. Lavelle *et al*., (2009) suggest that the relational model of justice delineates the second mechanism though which organisational justice can influence organisational commitment. They imply that organisational justice signals to employees that they are valued and respected by their organisation; and the fairness enacted by organisational agents motivates employees to make the organisation part of their social identity because people like to align their self-concepts with a morally admirable entity such as a fair organisation. This psychological alignment with the organisation or its values is none other than organisational commitment (Mowday *et al*., 1982).

The weight of empirical evidence generally support the positive relationship between organisational justice and organisational commitment (e.g. Fassina, Jones, & Uggerslev, 2008a; Lavelle *et al*., 2009; Lehmann-Willenbrock *et al*., 2013). Accordingly, it is hypothesised as follows:

Hypothesis 5: There is a positive relationship between organisational justice and organisational commitment.

2.8. Organisational commitment as a mediating variable between OCB and a) leadership, and b) organisational justice

An implicit, though not necessarily a definitive link, is that organisational commitment mediates the relationship between both leadership and organisational justice, and OCB. This is because organisational commitment is related to OCB, and in turn, both leadership and organisational justice are related to organisational commitment (see Figure 2.1). In other words, social contextual variables like leadership and organisational justice (distal predictors) are expected to affect organisational commitment (proximal factor), which in turn is expected to affect OCB.

As early as 1990, Podsakoff, MacKenzie, Moorman, & Fetter (1990) indicated that the aggregate effects of leadership behaviours on OCBs were indirect, rather than direct. Wang, Oh, Courtright and Colbert (2011) have also recommended the investigation of mediating factors between transformational leadership and different performance criteria, including OCB. Drawing from earlier studies, they asserted that 'transformational leadership may increase individual-level performance through its effects on follower motivation and attitudes' (p. 251). The present study proposes organisational commitment as an explanatory (mediating) variable between leadership and OCB.

Some studies have actually found that organisational commitment mediates the relationship between organisational justice and OCB. Lavelle *et al*. (2009) found that organisational commitment mediated the positive relationship between organisational justice and OCB. Similarly, Lehmann-Willenbrock *et al.* (2013) found that the positive relationship between procedural justice and OCB was mediated successively by trust and commitment. Along these lines, the meta-analytic study by Colquitt *et al.* (2013) revealed that 'social exchange

quality' (trust, organisational commitment, perceived organisational support, and leader-member-exchange) mediated the relationship between organisational justice and OCB.

In summary, the weight of conceptual and empirical evidence points to organisational commitment as an explanatory factor between both leadership and organisational justice, and OCB. The current study therefore hypothesises as follows:

Hypothesis 6: Organisational commitment mediates the relationship between OCB and (a) leadership and (b) organisational justice.

While hypothesis 6 is conceptually sound and empirically feasible, alternative explanations have been developed and tested. Fassina *et al.* (2008*a*) provide three such alternative explanations.

Spurious effects model: The first alternative explanation suggests that once the relationship between organisational justice and OCB has been controlled, there is no relationship between organisational commitment and OCB (Moorman, Niehoff, & Organ, 1993). This is because organisational justice correlates with both OCB and organisational justice, and hence the correlation between organisational commitment and OCB may be spurious.

It has been posited that while job satisfaction and organisational commitment reflect employees' attitudes toward the organisation, organisational justice (fairness) reflects their perception of how the organisation is acting towards them. In other words, while job satisfaction and organisational commitment capture both cognition and mood, fairness (component of job satisfaction) represents a conscious calculation of the environment. This implies that organisational justice captures directly an employee's cognitive appraisal and potential

receptivity to social exchange processes and managerial interventions (Moorman *et al*., 1993).

Based on the above logic, Organ (1990) and Moorman *et al*. (1993) suggest that the relationship between job satisfaction (and indeed organisational commitment) and OCB may be overstated because job satisfaction (and commitment) measures may reflect large components of fairness. These theoretical conjectures have put in doubt the consistent relationship established between organisational commitment and OCB, and by implication, the mediating effects of organisational commitment in the positive relationship between organisational justice and OCB.

Some empirical studies have attested to the proposition that in the presence of organisational justice, the effects of job satisfaction or organisational commitment on OCB may be muted. For instance, Williams and Anderson (1991) found that the cognitive components of job satisfaction (similar to organisational justice) were more predictive of OCB than affective components of job satisfaction and organisational commitment. More directly, Moorman *et al*. (1993) posited and found that once the relationship between organisational justice and OCB was controlled; there were no individual relationships either between commitment and OCB; or between job satisfaction and OCB.

Even though these arguments are often advanced and examined when evaluating the unique effects of organisational justice, organisational commitment and job satisfaction on OCB, it may be expected that another leader-referenced concept such as leadership may have similar effects as organisational justice on OCB. Organ and Ryan (1995) and Organ *et al*. (2006) have proposed a central '*m*' factor in

work attitudes (i.e. 'morale' representing affective commitment, fairness, job satisfaction and leader consideration).

Independent effects model: The second alternative explanation is to the effect that both organisational commitment and organisational justice have independent effects on OCB. This view posits that organisational commitment and organisational justice are conceptually distinguishable based on how they are evaluated; and the extent to which they are morally-laden (Fassina *et al*., 2008a).

First, it can be argued that an evaluation of 'committed' versus 'not committed' is not the same as 'fair' versus 'unfair' (Fassina *et al*., 2008a). For instance, an employee may still be committed to an organisation whose supervisors treat employees disrespectfully (unfairly) as long as a) the organisation affords the employee an opportunity to further their studies; and b) there is value congruence between the organisation and the employee. Second, evaluations of organisational justice are often morally-laden to a greater extent than evaluations of commitment because 'fairness judgements are rooted in deeply held norms and moral conduct' (Fassina *et al*., 2008*a*: 165; Lavelle *et al*., 2009).

In summary, Fassina *et al*. (2008*a*) submits that organisational justice and organisational commitment have independent effects because the two constructs affect OCB using different mechanisms.

In their meta-analytic study, Fassina *et al*. (2008*a*) found that organisational justice and job satisfaction had independent effects on OCB; and that organisational justice explained variance in OCB that was not captured by job satisfaction, and by implication, organisational commitment because the two attitudes share similar attributes. This is in line with an earlier meta-analytic work by Organ and Ryan (1995)

which ruled out the possibility that any of these variables mediated or replaced the relationships of others with OCB. More specifically, the meta-analytic study by Organ and Ryan (1995) found that fairness was not a better predictor of OCB than both job satisfaction and organisational commitment. The study further found that fairness, job satisfaction, organisational commitment and leader supportiveness produced roughly comparable correlations with OCB, and that none of the predictors mediates the effects of others (independent effects model).

Mediated model: The present study supports the mediated model in which organisational commitment mediates the relationship between organisational justice and OCB. The mediated model is more likely to explain the relationships among the studied variables than other models for at least two reasons. First, affective commitment, and not calculative commitment, is evaluated in this study, and this is likely to be distinguishable from the evaluation of calculative components of fairness (Moorman *et al*., 1993). Second, affective commitment is often described as an indicator of social exchange quality, or an exchangeable resource that should plausibly mediate the relationship between a fair organisation or supervisor and OCB (Colquitt *et al*., 2013; Cropanzano & Mitchell, 2005; Lavelle *et al*., 2009).

From the empirical viewpoint, some studies have supported the mediating role of organisational commitment between organisational justice and OCB. Lavelle *et al*. (2009) found that while organisational commitment mediated the positive relationship between procedural fairness and OCBO, work-group commitment mediated the positive relationship between work-group procedural fairness and OCBI. Lehmann-Wellenbrock *et al*. (2013) found that while the link between procedural justice and organisational citizenship behaviour was

successively mediated by organisational trust and organisational commitment, the link between procedural justice and co-worker citizenship behaviour was successively mediated by co-worker trust and co-worker commitment. However, Lehmann-Wellenbrock *et al*.'s (2013) study also found that the mediated relationship did not completely explain the effects of procedural justice on OCB-O and OCB-I because there were some effects of procedural justice that were not mediated. The final study along these lines is the meta-analytic study by Colquitt *et al*. (2013) which found that '*social exchange quality'* (trust, organisational commitment, perceived organisational support, and leader-member-exchange) mediated the relationship between justice and OCB. Colquitt *et al*. (2013) hypothesised further and found that both positive and negative affect mediated the relationship between organisational justice and OCB. The role of affect in this relationship provides an alternative explanation to popular social exchange processes, and can probably be based on Broaden-and-Build theoretical framework of positive emotions which posits that positive emotions enlarge one's thought-action repertoires, which in turn promotes discovery of new ideas and social relationships (Fredrickson, 2004). The affective nature of commitment used in the present study increases the probability that the concept mediates the positive relationship between organisational justice and OCB.

However, even though the mediating effects of organisational commitment between either leadership and OCB, or organisational justice and OCB are expected in this study, there are some odds that leadership and organisational justice (representing cognitive or calculative appraisal of environment) may be related directly with OCB. As a result, in the following sections the direct relationships between leadership and OCB on hand, and organisational justice and OCB on

the other hand are tentatively proposed. These relationships are represented by weak dotted lines in Figure 2.1.

2.9. Leadership and OCB

Leadership, particularly transformational leadership, is expected to influence extra-role behaviours such as OCB because this type of leadership 'implies achieving performance beyond expectations' (Bass, 1985; Purvanova, Bono & Dzieweczynski, 2006).

Based on SET and JD-R Theory, it can be explained why employees who perceive quality leadership can engage in OCB. First, employees can reciprocate the perceived support, information and consideration they get from leaders by going an extra-mile on behalf of the organisation. Second, supportive leadership acts as a key job resource that signals to employees that it is acceptable and safe to go beyond the call of duty. Third, transformational leaders inspire followers to internalise organisational goals; identify with their organisations; and engage in OCBs that help them maintain membership of their organisations (Blader & Tyler, 2009; Wang *et al*., 2011).

Based on the framework advanced in this study, prior empirical research found positive relationship between leadership and OCB. This has not only been supported by individual empirical studies (e.g. MacKenzie, Podsakoff, & Rich, 2001; Purvanova *et al*., 2006), but also by previous meta-analyses on OCB (e.g. LePine *et al*., 2002; Organ & Ryan, 1995; Podsakoff *et al*., 2000; Wang *et al*., 2011). For instance, Posakoff *et al*. (2000) provided evidence that leadership was a consistent predictor of OCB. Similarly, Wang *et al*. (2011) found positive relationships between individual-level follower performances across different criterion types, including contextual performance (OCB).

On the contrary, Park, Song, Yoon and Kim (2013) found that transformational leadership did not have a direct relationship with OCB, but was rather mediated by psychological ownership. Even though Purvanova *et al*. (2006) found that transformational leadership was significantly linked to citizenship behaviours, once the perceived job characteristics were added to the model, the effects of transformational leadership became insignificant, suggesting that job characteristics fully mediated the positive relationship between transformational leadership and citizenship behaviours. Another instructive evidence of some mediated relationship was provided by Piccolo and Colquitt (2006), who found that the direct effects of transformational leadership on task performance and OCB were supplemented by indirect effects through the mechanism of job characteristics, intrinsic motivation, and goal commitment.

These studies suggest that leadership, as a social contextual factor, may not always have a direct impact on behaviour, but may sometimes be mediated, either fully or partially, by some factors. In support of this proposition, Wang *et al*. (2011) have earlier called on researchers to examine attitudinal mediators between leadership and performance criteria, including OCB.

Although the effects of transformational leadership on OCB are expected to be stronger than those of contingent-reward leadership, a positive relationship can still be expected between contingent-reward leadership and OCB because the 'augmentation effects' phenomenon suggests that transformational leadership augments rather than replace the effects of contingent-reward leadership (McKenzie *et al*., 2001). The meta-analytic study by Wang et al. (2011) has provided support of the augmentation effect of transformational leadership over contingent-reward leadership.

Based on the above documented theory and evidence, it is plausible to tentatively hypothesise as follows:

Hypothesis 7: There is a positive relationship between leadership and OCB.

2.10. Organisational justice and OCB

One of the most widely researched predictors of citizenship behaviours is organisational justice (Lavelle *et al*., 2009; Spitzmuller *et al*., 2008). The relationship between organisational justice and OCB is also underpinned by the theoretical framework of this thesis.

First, drawing again from SET, the norm of reciprocity posits that employees should reciprocate good or fair treatment by engaging in desirable behaviours such as OCB and IWB (Lavelle *et al*., 2009). Second, JD-R theory also considers justice as a contextual job resource that may induce intrinsic motivation, which in turn may prime employee extra-role behaviours (Agarwal, 2013). Lastly, since organisational justice is closely associated with the facilitation of employee voice, CET (Deci & Ryan, 1985) supports that treating employees with respect and honesty (or providing them with adequate information) may signal a supportive environment necessary for risk-taking and intrinsic motivation; both of which may be required for performance of extra-role performance (Anderson *et al*., 2014).

Several authors suggest that organisational justice is one of the consistent predictors of OCB (Spitzmuller *et al*., 2008). This relationship has been shown in primary studies (Lavelle *et al*., 2009; Moorman et al., 1993; Fassina et al., 2008*b*) and meta-analytic studies (Organ & Ryan, 1995; Fassina et al. 2008*a*; Podsakoff *et al*., 2000). How this relationship is affected by related predictors such as

leadership, organisational commitment, and job satisfaction is however not conclusive.

In summary, whether or not organisational commitment mediates the relationship between organisational justice and OCB is unclear, and more studies from different contexts are needed to further clarify and solidify the relationship. What is evident though is that organisational justice is also related to OCB.

Hypothesis 8: There is a positive relationship between organisational justice and OCB.

2.11. Organizational commitment and OCB as successive mediating variables between IWB and a) leadership, and b) organizational justice

The hypothesised model (Figure 2.1) suggests a two-step-mediation in which organisational commitment and OCB successively mediate the relationships between organisational justice and leadership (independent variables), and IWB (criterion variable). In other words, it is expected that both organisational justice and leadership (independent variables) affect organisational commitment (first mediator); which in turn affects OCB (second mediator); and which ultimately affects IWB. The proposed model is motivated by, among other issues, the existing findings that indicate that the direct relationships between either leadership and IWB, or organisational justice and IWB are difficult to ascertain (Hoever & Zhou, 2014; Mumford *et al*., 2002).

Leadership and IWB Even though leadership has been identified by many researchers as being one of the most important contributors to creative and innovative performance (Mumford *et al*., 2002), it has surprisingly been understudied (Jung *et al*., 2003). The lack of studies in this area is further surprising because leadership and IWB have

strong conceptual relationships. For instance, the transformational leadership behavioural dimension of *intellectual stimulation* challenges followers to question old assumptions; and so to speak; to think '*outside of the box'* and adopt new approaches. Besides, as indicated before, SET, JD-R Theory, and CET predict the positive link between leadership and IWB.

While the conceptual framework advanced in this study has contributed useful insights into how leadership might influence IWB, empirical studies have produced mixed findings (Basu & Green, 1997; Pieterse, van Knippenberg, Schippers & Stam, 2010; Vigota-Dagot & Beeri, 2011).

Jung *et al*. (2003) found that transformational leadership was positively and directly related to organisation's innovative capacity. The study by Reuvers *et al*. (2008) replicated the positive relationship between transformational leadership and IWB at the individual level in four Australian hospitals. Similar results were also reported by Rank et al. (2009).

Against these positive results, some earlier studies have pointed to unexpected and sometimes counter-intuitive results. For instance, Kahai, Sosik and Avolio (2003) reported that transformational leadership was not superior to transactional leadership in the production of novel ideas; and the study by Vigoda-Gadot and Beeri (2011) found the positive and negative relationships between change-oriented extra-role behaviour, and transactional leadership and transformational leadership respectively. Jaussi and Dionne (2003) found that transformational leadership was not related to individual creative performance, but instead was significantly and negatively related to group creative performance. One other study along similar

lines (Basu & Green, 1997) found the negative relationship between transformational leadership and creativity.

Some weaknesses identified in past studies include lack of explanation of mediating and moderating variables; lack of clarity on levels of analysis; inadequate criterion content; and aggregating creativity and innovation in evaluating the effects of leadership on IWB (Mumford & Licuanan, 2004). For instance, the impact of transformational leadership reported by Jung *et al*. (2003) may owe from the fact that their study was not based on creativity per se, but innovation, and was analysed at the organization and not individual level (Mumford & Licuanan, 2004). As suggested by Yukl (1999) and Jung *et al.* (2003), transformational leaders may influence effective strategies, climate, structure, and culture; all of which may act as a context of creativity. These issues are not included in popular measures of transformational leadership (Yukl, 1999).

A promising avenue for leadership and IWB research involves including the variables that may mediate or moderate the relationship between leadership and IWB. For instance, even though Pieterse *et al*. (2009) did not find the direct relationship between transformational leadership and innovative behaviour; they found that the relationship was moderated by psychological empowerment of followers. López-Domínguez, Enache, Sallan and Simo (2013) found that transformational leadership (individualised consideration) related to change-oriented OCB via role breadth self-efficacy and felt responsibility for constructive change. The study by Qu, Janssen and Shi (2015) found that the relationship between transformational leadership and follower creativity was mediated by follower relational identification with the leader. Furthermore, Qu *et al.* (2015) found that leader creativity expectations moderated the relationship between

follower relational identification with follower creativity. Along similar lines, Huang, Krasikova and Liu (2016) found that the effect of leader creative self-efficacy on creativity was mediated by two sequential mediators (leader encouragement of creativity and follower creative process engagement), especially under conditions of high leader-member-exchange (LMX) context. The recent study by Koseoglu, Liu and Shalley (2017) also found that the supervisors' own level of creativity (component of leadership) associated indirectly with employees' creativity through creative role identity, especially when there was perceived organisational support for creativity.

Taken together, a number of mediating and moderating factors between leadership (attributes and behaviours) and IWB have been considered before, including, psychological empowerment (Pieterse et al., 2009); creative self-efficacy (Liu et al., 2016, Huang *et al*., 2016); leader expectations of creativity (Qu *et al*., 2015); openness to experience (Simmons, 2011); learning goal-orientation (Bettencourt, 2004); intrinsic motivation, leader encouragement of creativity, and creative process engagement (Zhang & Bartol, 2010); etc. Conspicuously missing is the role played by OCB.

The present study suggests organisational commitment and OCB as successive mediating (explanatory) factors between leadership and IWB. As argued previously, the good working relationship that emanates from among other factors, support and consideration of leaders, should plausibly increase the employee commitment and affiliative OCB in that order; and the latter arguably sets the scene for creative and innovative performance. Organ (1997:91) asserts that OCB sets a scene that maintains and enhances the social, organisational and psychological context that supports task activities.

According to Social Information Processing (SIP) Theory (Salancik & Pfeffer, 1978), employees rely on cues from co-workers in their immediate social environment. Co-workers express such cues through overt statements or indirectly through behaviours (Chen, Takeuchi, & Shum, 2013). It can therefore be expected that when employees show OCB (e.g. helping colleagues complete assignments), they create implicit obligations to their colleagues to reciprocate by adopting similar behaviours (Nohe & Michaelis, 2016; MacKenzie *et al*., 2011). It has been empirically shown that the focal employee's OCB is positively related to co-worker's OCB (Chen *et al*., 2013). These symbiotic relationships (social capital) may result in work contexts that support creative and innovative performance because high-quality co-worker relationships foster divergent thinking and creativity (Chen *et al*., 2013).

It is also possible that IWB, which is sometimes perceived as risky (Agarwal, 2013; Janssen, 2004), hinges not only on employee ability and intrinsic motivation (Amabile, 1996; Amabile & Pillemer, 2012), but also on affiliative OCB and other social and relational cues. Perry-Smith and Mannucci (2017:58) posit that intrinsic motivation, which undergirds creative and innovative behaviour, 'flourishes in contexts characterised by a sense of security and relatedness'. OCB is known to 'lubricate the social machinery of the organisation', and hence reduces friction and uncertainty (Naqshbandi, Singh, & Ma, 2016).

In order for employees to share knowledge; help each other (OCB-I); and engage in perspective taking; the environment should be conducive for such activities; and this study submits that affiliative OCB is suited to provide such environment because of its non-controversial nature. Naqshbandi *et al*. (2016) found that OCBs

positively predicted in-bound and out-bound open innovation initiatives.

In summary, the existing theoretical and empirical evidence suggests a good reason to believe that leadership behaviours may influence extra-role behaviours such as OCB and IWB (Mumford *et al*., 2002; Podsakoff *et al*., 2000). However, since it is generally difficult to find reliable and main leadership effects on IWB (Zhou & Hoever, 2014), the present study suggests organisational commitment and OCB as intervening explanatory mechanisms between leadership behaviours and IWBs.

Hypothesis 9a: organisational commitment and OCB successively mediate the positive relationship between leadership and IWB.

Organisational justice and IWB There has been paucity of research on the relationship between fairness and creativity (Shalley & Gilson, 2004). According to Shalley and Gilson (2004) this is surprising because the contexts in which creativity thrives (e.g. participatory safety and participation in creative processes) have features of fairness. Even the little research done indicates that establishing the direct relationship between organisational justice and IWB has also to-date proven elusive (Anderson *et al*., 2014; Khazanchi & Masterson, 2011; Simmons, 2011). This equivocality has led researchers to exploring indirect relationships between justice and IWB.

George and Zhou (2007) found the three-way interaction between interactional justice, positive and negative moods in explaining employee creativity. The study by Khazanchi and Masterson (2011) found that the effect of interactional justice (interpersonal and informational) from the organization and the supervisor was mediated by trust and social exchange processes on employee creativity.

Organizational justice was also the subject of Janssen's (2004) study, who found that innovative behaviour impacted positively on burnout and anxiety when procedural and distributive forms of justice were low. Another impact of organizational justice on creativity and innovation was reported by Simmons (2011), who also found that the relationship was moderated by openness to experience.

In summary, the existing limited literature suggests that the direct relationship between organisational justice and IWB may be difficult to establish. It appears as if a promising avenue for justice and IWB research will be the one that incorporates other variables that may mediate or moderate the relationships between the two concepts.

This study therefore proposes that organisational commitment and OCB may successively mediate the positive relationship between organisational justice and IWB (Figure 2.1).

As suggested in earlier sections, it is expected that employees may reciprocate good and fair treatment from employers through commitment, which in turn would prompt employees to engage in affiliative OCBs. This form of OCBs is known for shaping a cooperative environment that is a critical catalyst for task activities and processes (Borman, Penner, Allen, & Motowidlo, 2001; Organ, 1997), which in the view of the author of this thesis, include IWB.

It is possible that before employees can engage in a potentially risky and discretionary behaviour such as IWB (Janssen, 2004), they first assess if the environment is safe and cooperative. In the context of proactive behaviours (self-initiated, future-focused actions aimed at bringing change in organisations) Vough, Bindl and Parker (2017) have suggested that proactivity is a function of the safe social context in

which it occurs. Environments created by OCB are typical of such safe and cooperative environments.

IWBs are also known to have features of in-role (task) and extra-role behaviours (Tuominen & Toivonen, 2011), and should plausibly be pronounced in environments created by OCB. It is therefore plausible that organisational commitment and OCB may successively mediate or explain the relationship between organisational justice and IWB.

Hypothesis 9b: Organisational commitment and OCB successively mediate the positive relationship between organisational justice and IWB.

Having formulated the above nine hypotheses based on existing frameworks, it was deemed necessary to explore some nuanced relations in form of research questions and propositions to be subsequently evaluated with the main hypotheses.

2.12. Exploratory research issues

Do variables have higher correlations with innovation, while having relatively lower correlations with creativity?

The common practice in prior studies has been to subsume creativity (idea generation) and innovation (idea promotion and idea implementation) into one summative scale (e.g. Janssen, 2000; 2004). Separating the two (and possibly more) stages of IWB would probably allow researchers to better evaluate the doubt cast by Mumford and colleagues (Mumford *et al*., 2002; Mumford & Licuanan, 2004) that transformational leadership has no effect on creativity (idea generation). These authorities posit, along with other critics (e.g. Basu & Green, 1997; Pieterse et al., 2009; Yukl, 1999), that followers that identify with transformational leaders may be loyal, and hence lack the initiative and audacity to criticize the vision of the leader, especially when the leader is visible (Mumford *et al.,* 2002).

Based on theories and empirical studies in the literature, it can be propounded that leadership might have influence on IWB; 'but that the relationship may be subdued with regard to idea generation; and be more pronounced with regard to idea promotion and implementation' (Khaola & Coldwell, 2017a:224). This proposition is supported by Mumford and Licuanan (2004) who posit that the influence of transformational leadership on creative performance may well reflect the influence of such leadership on idea support. Furthermore, the Upper Echelons Theory posits that leaders have enormous power of architecting the strategy that reflects their dispositions and personal biases (Hambrick, 2007), and hence supporting and implementing creative ideas falls more within the sphere of managerial influence than generation of ideas which may require employee ability. Furthermore, as suggested by Behavioural Plasticity Theory (the extent to which behaviour is influenced by social experiences), in comparison to creativity, innovation may be more likely to be influenced by leadership and other social contextual behaviours because it is regarded as a social process that relies on the support of other employees (Rank *et al*., 2009:467).

The present study puts forth the exploratory proposition that socially-embedded concepts such as leadership and OCB would have stronger correlation with innovation (idea support and idea implementation) than creativity (idea generation) because of the social and relational nature of innovation.

Some prior studies have also failed to discover some differential impact of organisational justice on IWB because they examined the impact of justice on the aggregated scale of creativity and innovation; and either its impact on creativity and innovation in separate studies.

As a result, these past studies hardly unpacked the possible differential influence of justice on creativity and innovation dimensions of IWB.

As suggested with regard to the relationship between leadership and IWB; the present study proposes again that organizational justice; another social and relational contextual variable; might be related to IWB; but that the relationship may be stronger with innovation (idea promotion and idea implementation) than with creativity (idea generation) because of the social nature of innovation (Rank *et al*., 2009). It has actually been conceptualized that creativity (idea generation) 'involves intra-individual cognitive processes, and innovation (idea support and implementation) primarily involves inter-individual social processes' (Anderson *et al*., 2014:1299).

While both conjectures are examined in this study, specific hypotheses are not formulated because prior work on them could not be found. The propositions are therefore treated as exploratory research questions.

In summary, this study asserts that some past approaches have not reflected the conceptual and empirical evidence that creativity and innovation are interrelated but different processes of IWB (Anderson *et al*., 2014). Specifically, it is not known how social factors relate to the two processes.

The two supplementary research questions are as follows:

Exploratory research question 1: Is the relationship between leadership and innovation stronger than the relationship between leadership and creativity?

Exploratory research question 2: Is the relationship between justice and innovation stronger than the relationship between justice and creativity?

What constitute the nature and types of OCB that facilitate IWBs?

Another important explorative aspect of this study was to examine the nature of OCBs that may increase the probabilities of facilitating IWBs. Gaining this understanding would not only assist researchers to accumulate and extend knowledge in this area, but would also help specify to practitioners what interventions are required to facilitate the performance of IWBs. While this issue cannot be addressed deductively, a number of theories and frameworks can be induced to provide useful directions (Khaola & Coldwell, 2017*a*). These include Entropic Citizenship Behaviour (ECB) conceptual heuristic device (Coldwell & Callaghan, 2014), Conservation of Resources Theory (Hobfoll, 1989, 2002), Attention Capacity and Resource Allocation Theories (Bergeron, 2007; Harrison & Wagner, 2016).

Based on an integration of thermodynamics concept of entropy; Laffer's curve of taxation; examples derived from military history and organisational theory; and two types of OCB (OCB-I and OCB-O), Coldwell and Callaghan (2014) introduced the concept of Entropic Citizenship Behaviour (ECB) as consisting of imbalanced states of OCBs (Khaola & Coldwell, 2017*a*). Coldwell and Callaghan's (2014) model is shown in Figure 2.4.

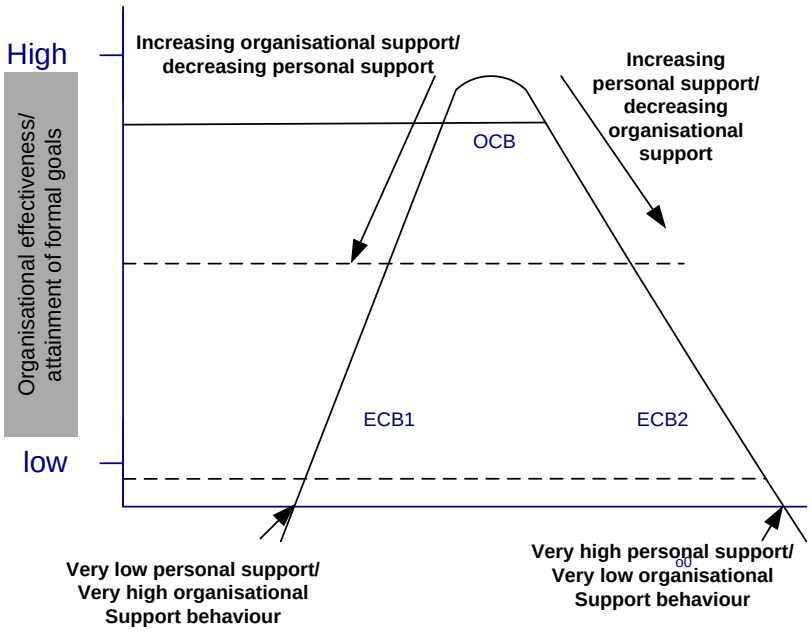

Figure 2.4: Diagrammatic representation of OCB, ECB and organisational effectiveness

Source: Adapted from Coldwell and Callaghan (2014), P.359

Central to Coldwell and Callaghan's (2014:348) conceptual heuristic device is the proposition that extreme forms of OCB directed at either peers or the organisation at the exclusion of the other may generate disequilibrium (ECB) which may restrict rather than improve organisational goals. Put differently, too much focus on either OCB-I or OCB-O may militate against achievement of organisational goals (Khaola & Coldwell, 2017*a*). For example, at ECB1, employees may over-conform to organisational norms and goals, with subsequent increases in burnout, work-family conflict, and decline in morale and worker productivity. At ECB2, employees may engage in fraternisation, with subsequent engagement in 'job-loafing' and decline in productivity (Coldwell & Callaghan, 2014).

As shown in Figure 2.4, Coldwell and Callaghan (2014) posit that the two forms of OCB should be balanced in order to be effective.

Coldwell and Callaghan's (2014) proposition is supported by the Attention Capacity, Resource Allocation, and Relational Identity Theories. In essence, these theories hold that people have limited attention capacity and resources, and using resources involves opportunity costs (Harari *et al*., 2016; Harrison & Wagner, 2016; Hobfoll, 2002). As suggested by Khaola and Coldwell (2017*a*: 226), 'employees have fixed time schedules to discharge their duties, and if they engage in too much OCB-I, they may not have enough time to engage in OCB-O, and vice-versa'.

The above theories are further bolstered by the Conservation of Resources Theory (Hobfoll, 1989, 2002). This theory holds that individuals accumulate cognitive resources to cope with work demands; but equally important, work demands may deplete accumulated resources and result in stressful situations (Hobfoll, 1989). For example, when employees engage in affiliation-oriented behaviours (e.g. OCB-I), they may accumulate personal resources such as reputation, happiness, self-esteem, self-efficacy and psychological capital (Schaufeli & Taris, 2014). However, since performing OCB is a 'time-dependent' activity, engaging in OCB-I may compete for time resources with engagement in OCB-O, and may subsequently deplete personal resources and negatively affect one's well-being. Conversely, progress towards work goal achievement may result in accumulation of cognitive, emotional and material resources such as job satisfaction, promotion and salary increases; but these resources may come at the expense of building relationships with others, which may be stressful, deplete accumulated resources, and

increase burnout (Bergeron, 2007; Coldwell & Callaghan, 2014; Khaola & Coldwell, 2017*a*; Koopman, Lanaj, & Scott, 2016).

Drawing from a combination of Relational Identity (Identification), Social Identity (Identification), and Self-Categorisation Theories, Sluss and Ashforth (2007) posit that at extremely high levels of relational identification (extent to which one defines oneself in terms of the role relationship with one's leader or co-workers), in-role performance beyond the dyad may suffer. This is because this over-identification may stifle other important relationships needed for supporting in-role performance (Sluss & Ashforth, 2007). Following Sluss and Ashforth (2007), it can be argued that employee engagement in extreme forms of OCB-I may hamper employee engagement in OCB-O at best and in-role performance at worst.

More specifically, when individuals focus their attention and cognitive energy on helping colleagues (OCB-I), they may deplete their attention and stock of cognitive resources available for helping the organisation (OCB-O), which may negatively affect creativity and innovation (Harrison & Wagner, 2016). Conversely, OCB directed at the organisation (vertical exchange relationship) can come at the expense of OCB directed at peers (horizontal exchange relationships) (Foster, 2014).

Organisations today value IWBs (organisational goal or performance); but since IWB may be a source of workplace disruption and violation of typical actions (Gao *et al*., 2011); innovative employees may harm existing relationships with their colleagues and supervisors (Anderson *et al*., 2014, MacKenzie *et al*., 2011); and may plausibly deplete their accumulated social support resources and capital.

This paradoxical nature of OCB is illustrated in the study by Koopman *et al*. (2016). They found that helping behaviour (OCB-I) did not only

increase positive affect, but also decreased the perception of progress toward goal achievement; both of which affected individual well-being. Along similar lines, Bergeron, Ostroff, Shroeder, and Block (2014) found that while the internally-oriented OCBs influenced outcomes negatively, the externally-oriented OCBs influenced them positively.

The differential impact of OCB types on organisational performance has implications for balancing OCB-I and OCB-O to facilitate IWBs. Since extant literature suggests that some individuals may be more adept at balancing competing or conflicting demands on their time than others (Koopman *et al*., 2016), it is conceivable that individuals who balance OCB-I and OCB-O may more effectively engage in IWBs. Along more or less similar lines, Bergeron (2007) suggests that balancing OCB with task performance is an imperative act for organisational effectiveness. On a broader level necessary for achieving sustainability, efficiency and effectiveness, Hotho and Champion (2010) and O' Reilly and Tushman (2013) encourage organisations to balance exploration and exploitation of innovation (ambidexterity).

Overall, the present thesis submits that balancing OCB-I and OCB-O may result in relatively higher IWB than engaging in either OCB-I or OCB-O at the exclusion of the other.

The key question asked is this: Is engaging in both OCB-I and OCB-O more effective in facilitating IWBs compared to engaging in either OCB-I and OCB-O at the exclusion of the other?

2.13. Conclusions

The aim of this chapter was to review the relevant literature concerning the relationships among leadership, organizational justice, organizational commitment, OCB (affiliative OCB) and IWB (change-oriented OCB). The chapter has drawn mainly from a combination of

SET, JD-R Theory, SIT, CET and existing empirical studies to propose nine (9) testable hypotheses and two exploratory research questions. The importance of focusing on the fine-grained details of the nature of OCBs that may facilitate IWBs is also highlighted.

The chapter points to some interesting gaps in the existing literature. The literature review suggests that despite the conceptual close relationship between OCB and IWB, there is very little empirical research done to evaluate this relationship. This generally tracks the paucity of research on the nomological network of affiliative and change-oriented OCBs. Based on conceptual and empirical literature, it is concluded that OCB is a plausible precursor of IWB ($\mathbf{H_1}$).

The weight of evidence from the reviewed literature points to the positive relationship between organizational commitment and OCB ($\mathbf{H_2}$), but this relationship has been challenged where organizational commitment and organizational justice are studied concurrently as is the case in this study. Because of its affiliation-oriented nature, this study strongly suggests OCB as an explanatory variable (mediator) between organisational commitment and IWB ($\mathbf{H_3}$).

The chapter has provided conceptual and empirical evidence that both leadership and organizational justice can influence organizational commitment in this study ($\mathbf{H_4}$ and $\mathbf{H_5}$ respectively). While this study examines the mediating effects of organizational commitment on the positive relationship between leadership and OCB, and organizational justice and OCB ($\mathbf{H_6}$), the direct relationships between leadership and OCB on one hand, and organizational justice and OCB on the other hand have been formulated ($\mathbf{H_7}$ and $\mathbf{H_8}$ respectively).

Evidence also suggests that neither leadership nor organizational justice can have consistent (reliable) directs effects on IWB, and as a

result, this study has suggested organisational commitment and OCB as sequential intervening or explanatory (mediating) factors between leadership and IWB (**H_{9a}**) and organizational justice and IWB (**H_{9b}**) respectively.

The literature review also suggests that both OCB and IWB are multi-dimensional and multi-faceted concepts, and therefore a multi-foci approach to their study is warranted. In this regard, the present chapter has proposed that a research frontier that holds promise involves examining the differential effects of situational social factors on creativity and innovation respectively.

Specifically, based on Behavioural Plasticity Theory, the current study explores the extent to which the relationships between innovation and leadership, and innovation and organisational justice on one hand, are stronger than the relationships between creativity and leadership; and creativity and organisational justice on the other hand.

The types of OCBs that may facilitate IWBs have reviewed, and the study proposes that striking a balance between OCB types hold promise for boosting IWBs.

Overall, after weighting evidence from the literature, the central thesis of the present study is that leader influence tactics (leadership and fairness) may influence IWBs via employee affective commitment and OCBs in series.

The list of hypotheses derived from the reviewed literature is summarised in Table 2.4.

Table 2.4: Summary of hypotheses

Reference	Description
Hypothesis 1	There is a positive relationship between OCB and IWB

Hypothesis 2	There is positive relationship between organisational commitment and OCB
Hypothesis 3	OCB mediates the relationship between organisational commitment and IWB
Hypothesis 4	There is a positive relationship between leadership and organisational commitment.
Hypothesis 5	There is a positive relationship between organisational justice and organisational commitment.
Hypothesis 6	Organisational commitment mediates the relationship between (a) leadership and (b) organisational justice and OCB
Hypothesis 7	There is a positive relationship between leadership and OCB
Hypothesis 8	There is a positive relationship between organisational justice and OCB.
Hypothesis 9	Organisational commitment and OCB successively mediate the positive relationship between a) leadership and IWB and b) justice and IWB
Exploratory research question 1	Is the relationship between leadership and innovation stronger than the relationship between leadership and creativity?
Exploratory research question 2	Is the relationship between justice and innovation stronger than the relationship between justice and creativity?
Exploratory proposition	Employee engagement in both OCB-I and OCB-O (balanced OCB) is more effective in facilitating their IWBs compared to their engagement in either OCB-I and OCB-O at the exclusion of the other.

CHAPTER 3
RESEARCH METHODOLOGY

3.1. Introduction

Chapter 2 presented the review of relevant literature, and on the basis of that literature review, formulated testable hypotheses for the present study. The present chapter focuses on research methodology.

Research methodology is a research strategy comprising of guidelines describing how the research is systematically conducted; and it should logically connect research questions to empirical data (Creswell, 2013).

This chapter specifically describes the methods, sampling techniques and procedures that were used in collecting and analysing data. The chapter therefore serves as a link between research hypotheses (questions) and the execution of the study.

The chapter is organised around six sections, namely, research design and setting; population, sampling and procedures; instrument and measures; method of analysis; approaches used to minimise and control common-method biases; and ethical considerations.

3.2. Research design and setting

The present study used a cross-sectional quantitative-dominant (post-positivist) research design incorporating a quantitative, deductive research design (correlational *ex post facto*) with an added open-ended question. A quantitative research design was deemed appropriate to address the deductive logic and hypotheses formulated in this study. This design was deemed specifically useful for measuring attitudes and perceptions; manipulating large data electronically; and relating one variable to the other (Babbie & Mouton, 2010). However, compared to its qualitative counterpart, this approach has been found relatively inflexible; and does not particularly permit an in-depth

engagement with participants and collected data (Babbie & Mouton, 2010).

To mitigate some of these weaknesses, qualitative data (data expressed in words) on OCB was also collected through open-ended questions to reinforce and validate quantitative data. One advantage of using additional qualitative data is that they do not only provide a richer and complementary information (Greene, Caracelli & Graham, 1989; Johnson, Onwuegbuzie, & Turner, 2007), but may also provide a better articulation of, and give further insights into the nature of the studied phenomena. Furthermore, this approach may be useful in mitigating common method biases prevalent in self-reports.

The study was conducted within the Maseru district, the political and economic hub of the Kingdom of Lesotho. Being the capital city, Maseru was the only town in Lesotho with some significant economic activity at the time of study, and was considered the best setting for the purposes and meaningful impact of this study.

3.3. Pilot Studies: Population, Sample and Procedures

The study was initially piloted on a net sample of 95 professional teachers who attended part-time classes for their Bachelor of Education Primary (B.Ed. Primary) at the medium-sized public university in Lesotho (Sample 1), and was re-examined and confirmed in net samples of 54 additional teachers from 8 different high schools (Sample 2), and 69 employees from various private and public sector organisations within Maseru district in Lesotho (Sample 3). In total, the study was progressively piloted on 214 participants (see appendix 1 for details). A large pilot study was necessary to cover public and private sectors adequately.

Cronbach's alpha and exploratory factor analysis were used to examine the internal reliability of scales and the dimensionality (validity) of items respectively. The correlations between variables in the model were used as a test for predictive and practical validities.

The Kaizer-Meyer-Olkin (KMO) test in all samples indicated an adequate number of 0.6 and better, and the Bartlett's test of sphericity (X^2) was significant in all samples, in a way indicating the validity and suitability of responses given to variables as determined by principal component factor analyses (Siebert & Kunz, 2016). Furthermore, the internal reliabilities of all scales were generally satisfactory. Finally, with the exception of few inconsistencies, the direction and significance of correlations across pilot studies were as expected.

The details and results of pilot studies are reported in appendix 1.

3.4. The Main Study: Population, Sample and Procedures

300 participants for the main study were selected randomly from a population of 652 employees (out of which 27 were on study development leave) from the medium-sized public university in Lesotho. In addition, a a non-probability sample of 122 employees from two government-owned enterprises and two private sector organisations located at their head-quarters in Maseru (Industrial Area); and 37 participants (all workers) in the Postgraduate Diploma in HRM at the medium-sized public university in Lesotho were asked to participate in the study.

To ensure that employees would understand the questions written in English, the sample was confined only to employees who held at least a post-school certificate.

Self-administered questionnaires were distributed to employees at their place of work or study, and were returned directly to the

researcher. Return rates were 56 per cent, 57 per cent and 68 per cent respectively. As could be expected, employees from the university had higher levels of education than employees from other organisations. However, ANOVA tests did not result in significant differences across various variables between the studied organisations. As a result, the three main study samples (n = 263) were analysed together. The use of a combined sample not only helped maintain the diversity in the sample, but also helped this study to capitalise on statistical power (Agarwal, Datta, Blake-Beard, & Bhargava, 2012).

Of the respondent sample, 52.3 per cent were males, and 47.7 per cent were females (n = 260). In terms of age, 1.1 per cent were between 18 and 20 years; 25.9 per cent were in the age group ranging from 20 to 30; 30.5 per cent were in the age group ranging from 31 to 40; 24.7 per cent were in the age group ranging from 41 to 50; and 17.8 per cent were in the age group ranging from 31 to 40 (n = 259, median age group = 31-40 years of age). In terms of highest level of education of respondents, 24.7 per cent had post-secondary school diploma; 33.6 per cent had bachelor's degree; and 41.7 per cent had post-graduate degree (honours, Masters and PhD) (n = 259, median qualification = bachelor's degree). Non-academic staff accounted for 64.6 per cent, and academic staff accounted for 35.4 per cent (n = 243). In terms of supervisory responsibilities, 53.7 per cent did not have any supervisory responsibilities; 22.6 per cent were in lower level management (supervisory level); 18.3 per cent were in middle level management; and 5.4 per cent were in top/executive level management (n = 257). The respondents had been in their current organisation for an average of 8.89 years (n = 243, SD = 8.02).

Since the missing value analysis (MVA) diagnostics showed that the missing values in all cases and variables were few (less than 10%) and

missing completely at random (MCAR); rather than drop cases with missing values; this study adopted an imputation approach (series mean) to fill in the missing values to preserve all cases (Chen *et al*., 2013). According to Hair *et al*. (2010), if the figure of missing data is under 10 per cent for individual cases or observations, it can be ignored unless the missing data occurs in a non-random fashion.

This study uses Cronbach's alphas (internal reliability), exploratory factor analyses (EFA), and confirmatory factor analyses (CFA) to examine the internal reliability of scales; the dimensionality of variables; and the convergent and discriminant validities of variables respectively. The KMO test of sampling adequacy (0.86) and the Bartlet test of sphericity (X^2 (820) = 4929.16, $p \leq 0.001$) were both acceptable, suggesting that the responses given suited the principal component factor analysis used (Siebert & Kunz, 2016).

The adequacy of sample size is important to get valid and reliable results in research. The general 'rule of thumb' for conducting SEM is that the sample size should be 200 elements or more (Hoe, 2008; Kline, 2011; Xerri & Brunetto, 2013). Green (1991) rejects 'the rule of thumb' and recommends that the sample size should at least be 50 plus eight times the number of predictors to ensure a statistical power of 0.80 in regression analysis. Even if variables of interest (4) and control variables (5) were all to be included in the model, the required sample size according to Green (1991) would be 50+8*9 = 122. Based on these requirements, the sample size of 263 for the primary study would be enough for the purposes of both SEM and other multivariate analyses.

Data collection instrument

The survey questionnaire was designed to collect data. After the review of literature on the constructs of interest, measures were adapted from existing scales and piloted to measure the constructs. Section A of the questionnaire entailed demographic data (e.g. name of organisation, gender, age, tenure, and level of education); sections B, C, and D comprised of 45 statements that were rated on variously anchored Likert-type rating scales; and the final section comprised of two open-ended questions.

The questionnaire was written in English, primarily for two main reasons. First, English is the formal language that is widely spoken and understood in Lesotho. Second, given their minimum level of education, participants could easily understand and communicate in English.

To encourage participation, the questionnaire was kept reasonably short, but with representative items tapping into various constructs identified in Figure 2.1. The specific items used to measure variables are described below.

3.5. Measures and coding

The measures described below are those used after being refined in pilot studies (see pilot studies in appendix 1 for the few items that have been dropped or refined). In order to reduce noise in the measurement models that is attributable to random error variance, as described below, some problematic items were deleted from the OCB scale (Becker, de Bruin, Györkös, Rossier, & Massoudi, 2016).

***Leadership*:** The Multifactor Leadership Questionnaire (MLQ) (Bass & Avolio, 1995) was piloted and used to assess employee perception of leadership. Eight (8) items were used to assess four dimensions of transformational leadership (intellectual stimulation, individualized

consideration, inspirational motivation, and idealized influence); and two (2) items were used to assess the contingent-reward form of leadership. Participants were asked to assess the extent to which the listed statements described the behaviour of their supervisors (principals) on a scale ranging from 0 (not at all) to 4 (frequently if not always). Sample items were 'my supervisor articulates a compelling vision for the future' and 'my supervisor indicates clearly what one can expect when performance goals are achieved'.

Avolio, Bass and Jung (1999) reported Cronbach's alphas ranging from 0.74 to 0.92 for dimensions of leadership used in this study. In the present study, Cronbach's alphas of transformational leadership and contingent-reward leadership scales were 0.92 and 0.78 respectively, and that of an *active constructive leadership* (comprising of transformational leadership and contingent-reward leadership) was 0.93.

The confirmatory factor analysis (CFA) showed that the first-order one-factor model of leadership demonstrated a good fit to data (X^2 (33) = 84.118, $p \leq 0.001$, NFI = 0.95, TLI = 0.95, CFI = 0.97, RSMEA = 0.08). This CFA results were achieved after correlating the error terms of two pairs of items: *lead1* and *lead2*; and *lead5* and *lead6* per the modification indices. According to Joreskog and Long (1993), a strong theoretical justification should support such a move. In this case, both *lead1* (*my supervisor encourages me to look at problems from different angles*), and *lead2* (*my supervisor stimulates me to think about old problems in new ways*) refer to intellectual stimulation dimension of transformational leadership. Similarly, both *lead5* (*my supervisor paints an interesting picture about the future*' and *lead 6* (*my supervisor articulates a compelling vision for the future*' refer to inspirational motivation dimension of transformational leadership.

Organisational justice: The scale developed by Niehoff and Moorman (1993) for measuring the dimensions of organizational justice was piloted and used to assess organisational justice in this study. In all, six items were used to assess organization justice. On a scale ranging from 1 (strongly disagree) to 5 (strongly agree), participants were asked to assess the extent to which they agreed with the given statements. Sample items were 'I think that my level of pay is fair', and 'to make job decisions, my supervisor collects accurate and complete information'. Niehoff and Moorman (1993) reported Cronbach's alphas of 0.74 for distributive justice; 0.85 for procedural justice; and 0.92 for interactional justice. In the present study, the Cronbach's alphas were 0.83, 0.79, and 0.86 for overall organisational justice scale, distributive justice and procedural/interational justice respectively.

The CFA of justice items demonstrated that the second-order two-factor model demonstrated a better fit to data (X^2 (8) = 30.612, $p \leq 0.001$, NFI = 0.94, TLI = 0.92, CFA = 0.96, RSMEA = 0.11) than the first-order one-factor model (X^2 (9) = 134.314, $p \leq 0.001$, NFI = 0.76, TLI = 0.61, CFI = 0.77, RSMEA = 0.252).

***Organisational commitment*:** Five items drawn from the scale of Cook and Wall (1980) to measure affective organizational commitment were piloted and used to measure this construct. Cook and Wall's (1980) scale is widely regarded as the leading measuring instrument in the field. On a scale ranging from 1 (strongly disagree) to 5 (strongly agree) the participants were asked to assess the extent to which they agreed with the listed statements. Sample item was 'I feel a strong sense of belonging to my organisation'.

Cook and Wall (1980) reported Cronbach's alphas of 0.80 and above for this scale. The Cronbach's alpha of this scale in the present study was 0.90.

The CFA showed that the first-order one-factor model of affective commitment demonstrated a very good fit to data (X^2 (5) = 6.005, p = 0.306, NFI = 0.99, TLI = 1.00, CFI = 1.00, RSMEA = 0.03).

Organisational citizenship behaviour: Ten (10) items developed by Podsakoff *et al*. (1990) to measure five OCB dimensions suggested by Organ (1988) and two items selected from the scale developed by Borman and Motowidlo (1993) to measure contextual performance were piloted and used to measure OCB within the context of the study. The items were measured on a scale ranging from 1 (strongly disagree) to 5 (strongly agree). Sample items were 'I volunteer to help others who have heavy workloads' and 'I voluntarily do more than the job requires'.

Podsakoff *et al*. (1990) reported Cronbach's alphas ranging from 0.70 to 0.85 for different dimensions of this construct. The Cronbach's alphas for different dimensions in the current study were 0.73 for altruism, 0.68 for sportsmanship, 0.66 for civic virtue, 0.71 for courtesy, 0.73 for conscientiousness, and 0.74 for an overall OCB scale.

The CFA showed that the first-order one-factor model of 12 items of OCB demonstrated the poor fit to data (X^2 (54) = 334.016, $p \leq 0.001$, NFI = 0.48, TLI = 0.40, CFI = 0.51, RSMEA = 0.154). After systematically and iteratively removing problematic items that had weak, insignificant or cross path loadings (e.g. based on modification indices), seven OCB items (α = 0.74) that loaded significantly on their specified factors were retained, and the second-order two-factor model

demonstrated a better fit to data (X^2 (8) = 24.848, $p \leq 0.01$, NFI = 0.93, TLI = 0.90, CFI = 0.95, RSMEA = 0.098) than alternative models.

Innovative work behaviour: Nine (9) items from the scale of Janssen (2000), and two items from the scale developed by de Jong and den Hartog (2010) were piloted and used to measure individual innovative work behaviour at work. De Jong and den Hartog's (2010) items were added to capture the idea exploration part in the innovation process. Participants were asked to rate how often they perform the list of duties in their organization on the scale ranging from 0 (never) to 4 (always). Sample items were 'creating original solutions for problems' and 'making important organisational members enthusiastic for innovative ideas'.

Janssen (2000) reported Cronbach's alphas of 0.95 and 0.96 for the self-rated and leader-rated scales of this construct. In the main study, the Cronbach's alpha for an overall OCB scale was 0.82, but after deleting the item 'searching out new working methods, techniques or instruments', the internal reliability of the scale improved to 0.90. The internal reliabilities for creativity and innovation (components of IWB) were 0.72 and 0.90 respectively.

The confirmatory factor analysis (CFA) showed that the first-order one-factor model of IWB demonstrated a fairly good fit to data (X^2 (27) = 91.626, $p \leq 0.001$, NFI = 0.91, TLI = 0.92, CFI = 0.94, RSMEA = 0.104).

Social Desirability**:** Social desirability was included as a control and common method marker variable. Two items from the scale developed by Crowne and Marlowe (1960) were used to measure this construct. The items were 'I never hesitate to help someone in trouble', and 'I

always practice what I preach'. These items were measured on a scale ranging from (1) strongly disagree to (5) strongly agree. The internal reliability of the scale was low (α = 0.61), and therefore the two items were not added into one scale. The concept was therefore not included as a marker variable in the primary study as was originally planned. However, as shown in pilot studies, partialling out this concept did not affect materially the significance of the relationship among the studied variables.

In sum, with the exception of some dimensions of OCB, the values of internal reliability of the main variables reached acceptable levels of 0.70 and better (Nunnally, 1978). Furthermore, relevant CFAs demonstrated that measurement models of each variable in this study fitted the data reasonably well.

***Open ended question*:** In addition to Likert-type answer format, participants were asked to respond to unstructured questions. They were prompted to think of instances (examples) of helpful job behaviours which they frequently perform, but that are neither specifically part of their job description nor rewarded in their organizations. They were then asked to give a brief description of such behaviours.

Early researchers on OCB used such qualitative approaches to identify OCB activities (Dekas, Bauer, Welle, Kurkoski, & Sullivan, 2013; LePine *et al*., 2002). For instance, the foundational study by Smith *et al*. (1983: 656) in this regard asked supervisors to describe instances of 'helpful, but not absolutely required… job behaviours'. Heeding the warning of Morrison (1994) that employees, and not supervisors, are best-positioned to describe their own behaviours, this study directed the question to employees. According to Morrison (1994), asking supervisors about employee extra-role behaviours is problematic,

particularly when researchers attempt to link such behaviours to employee cognition and affect.

Overall, 170 employees generated about 350 behavioural descriptions (about 2 incidents per respondent). Behavioural incidents thus gathered were systematically identified, categorised, and coded by more than one person. The incidents were classified into categories by means of content analysis, and an agreement index was constructed by the panel of 3 people (the current author and two other researchers – a PhD student in information systems and a lecturer in HRM). This panel classified the items into categories based on similarity of item content. The panel members independently categorised OCBs collected through open-ended question as either OCB-I or OCB-O.

The panel members discussed and agreed to use Organ's (1988) definition of OCB (to decide whether the prescribed behaviour was OCB or not) and Williams and Anderson's (1991) categorisation of OCBs (to decide whether the OCB was OCB-I or OCB-O). Respondents who did not answer qualitative questions (or gave non-behavioural or ambiguous answers) were coded 0; those who gave answers reflecting OCB-I were coded 1; those who gave answers reflecting OCB-O were coded 2; and those who gave answers reflecting both OCB-I and OCB-O were coded 3. The initial agreement was ninety per cent (90 %) in the categorisation of OCB incidents, and after collaborative deliberations, the panel was able to agree on appropriate coding of the remaining OCBs collected through open-ended questions.

Of the respondent sample, 93 (35.4%) were classified as employees who were either non-respondents or did not engage in OCB; 72 (27.4%) as those who engaged in OCB-I; 67(25.5%) as those who engaged in OCB-O; and 31 (11.8%) as those who engaged in both OCB-I and OCB-O.

The purpose of this open-ended question was three-fold. First, it was designed to reinforce and validate the data collected through structured means. Second, open-ended questions may check against acquiescence, and hence can potentially reduce the common method bias (Podsakoff, MacKenzie, & Podsakoff, 2012). Third, and more importantly, this approach was used to explore and evaluate in detail the types of OCBs that may facilitate IWBs.

Of all the variables of this study, the one-way ANOVA tests indicated that only civic virtue dimension of OCB differed significantly across the qualitatively measured and coded groups of OCBs (F '3, 207' = 4.893, p = 0.003).

Interestingly, those who reported engaging in OCB-O rated civic virtue highest (M = 3.94, SD = 0.65); followed by those who reported engaging in both OCB-O and OCB-I (M = 3.68, SD = 0.95); followed closely by those who reported engaging in OCB-I (M = 3.60, SD = 0.96); and followed last by those who did not report engaging in any type of OCB (M = 3.30, SD = 0.99). Given that civic virtue is often categorised as OCB-O (Podsakoff *et al*., 2009), it is probable that the study participants fairly understood the questionnaire used herein.

Control factors: Becker (2005) recommends that researchers should not only include, but also provide explanation for inclusion of control variables. Since attitudes and behaviours can be influenced by demographic factors (Mowday *et al*., 1982), a number of demographic factors were included in the study as control variables to reduce the possibility of spurious relationships that may be caused by such factors (Coyle-Shapiro, Kessler, & Purcell, 2004). For instance, Janssen (2000) has indicated that people with more experience and in higher levels of management have better opportunities and skills to demonstrate extra-role behaviours than their less experienced counterparts in lower

positions, making it necessary to control tenure and management level in the prediction of extra-role behaviours. Demographic factors included in the study were gender (females = 0, males = 1); age (less than 20 =1, 20-30 = 2, 31-40 = 3, 41-50 = 4, above 50 = 5); tenure (number of years in current organisation); supervisory responsibilities (None = 0, supervisory level/head of department = 1; middle management/dean = 2, Top/executive level = 3); level of education (primary = 1, secondary = 2, high school = 3, post-school diploma = 4, bachelor's degree = 5, Postgraduate = 6); organisation (University = 0, others = 1); and whether one was an academic or non-academic (academic = 1, non-academic = 0).

The final instrument employed in this study is shown in appendix 2.

3.6. Approaches used to minimize and control common-method biases

Since one instrument was used to collect data from one source in a cross-sectional study, one could argue that the same-source and common-method biases could affect the results. Even though Spector (2006) has suggested that common method bias is rarely serious enough to invalidate the results, this study adopted some procedural and statistical approaches to minimize these potential biases (Podskoff *et al*., 2012).

First, all questions were answered anonymously, and the questionnaires were returned directly to the researcher; thus reducing any need for respondents' social desirability bias (Crowne & Marlowe, 1960). Second, existing scales were adapted and piloted to ensure that the scale items were clear and unambiguous to respondents. Third, the physical proximity between predictor and criterion variables on the questionnaire was minimised. Fourth, even though the scale items

were measured using the Likert-type format, the scale similarities were minimized between predictor, mediator and criterion variables. For instance, leadership was measured on a scale ranging from 0 (not at all) to 4 (frequently, if not always); OCB was measured on scale ranging from 1 (strongly disagree) to 5 (strongly agree); and IWB was measured on scale ranging from 0 (never) to 4 (always).

The inclusion of open-ended questions in the questionnaire should have also plausibly broken the pattern and rhythm in the way participants answered questions. Fifth, at least two items in the OCB scale were worded negatively and reverse-coded to reduce the biasing effects of item similarity and acquiescence. Sixth, the social desirability variable was included as a marker and control factor, especially during the pilot phase of the study. Lastly, the Harman's one-factor test was used to check for the possibility of common method error in the measurement of variables.

3.7. Ethical considerations

Ethical considerations are important when one conducts research (Babbie & Mouton, 2010). When conducting the current study, care was taken to ensure that no emotional harm was inflicted, or coercion was put to the study participants (Babbie & Mouton, 2010). For instance, the respondents were informed that their participation in the study was voluntary, and participation or nonparticipation would not affect their benefits. Participants were further informed that they were free to withdraw from the study without penalty or loss of benefits. Furthermore, confidentiality and anonymity were guaranteed because participants were requested not to write their names on the research instrument. To further ensure confidentiality, questionnaires were returned directly to the researcher. Overall, the participants of the present study were not deceived, and as shown in appendix 3,

adequate information was given for them to make informed decisions before participating in the study. In terms of analysis, data were analysed collectively, and could therefore not be identified with individual participants in the study. Safekeeping of both questionnaires and data was carefully attended to. For instance, questionnaires were stored in a locked cabinet, and a special laptop was bought to save data relating to this project. The instrument that was used to collect data was also checked and cleared by the Ethics Committee (non-medical) at Wits University in Johannesburg.

3.8. Data Analysis strategy

Statistical Package for Social Sciences (SPSS-version 20) was used to analyse data. Specifically, factor analysis, correlation, and structural equation modelling (AMOS version 24) were used to address the hypotheses. To reinforce quantitative information, open-ended questions from the survey were analysed qualitatively and inductively as explained above.

3.9. Conclusions

The aim of this chapter was to present general research methods, sampling techniques and procedures used to collect and analyse data. The quantitative-dominant research design was suggested and described as the favoured research design to address the problem statement, research objectives and hypothesised relationships in this study. This was followed by the description of the population, sample sizes, and sampling techniques for both pilot and main studies. The instrument used to collect data, including the measurement of variables and the design of open-ended questions were then described. Because of the self-report nature of this study, the approaches used to minimise and control common method biases were described in some detail. Also, how this study ethically collected and analysed data was

explained. In all, the total number of subjects across pilot and main studies available for analyses was 477.

The summary of variable measures and their reliabilities are shown in Table 3.1.

Table 3.1: Summary of measurement of the main study variables

Variable	**# of items used**	**Items deleted**	**Cronbach's alpha**
Transformational leadership	8	0	0.92
Contingent-reward leadership	2	0	0.78
Active constructive leadership	**10**	**0**	**0.93**
Organizational Justice	**6**	**0**	**0.83**
Procedural justice	4	0	0.86
Distributive justice	2	0	0.79
Organizational commitment	**5**	**0**	**0.90**
OCB	**12**	**7**	**0.74**
IWB	**11**	**1**	**0.90**
Social desirability	2	0	0.61

Taken together, the research design and strategies used to collect and analyse data provide reasonable confidence that the results of the study were valid and reliable.

CHAPTER 4

DATA ANALYSIS AND RESULTS

4.1. Introduction

The previous chapter presented details on how the current study was planned, piloted and executed. In other words, the previous chapter presented the research design and methodology employed to address the aims and hypotheses of the study. On the basis of the described methodology, the aim of this chapter is to present how data were analysed and the subsequent findings of the study. Throughout the chapter, the statistical results are considered significance if their probability is 0.05 or less (i.e. confidence level of 95 per cent or better)-two-tailed. Where the study uses structural equation modeling (SEM) to examine the extent to which the model fits data, it reports multiple model fit indicators, including chi-square (X^2), normed fit index (NFI), comparative fit index (CFI), Tucker-Lewis index (TLI), relative fit index (RFI), and root mean square error of approximation (RMSEA). Even though exact figures differ, the model has traditionally been considered to fit data well if X^2 is small (not significant for small samples)**,** NFI ≥ 0.90, CFI ≥ 0.90, TLI ≥ 0.90, RFI ≥ 0.90, and RMSEA ≤ 0.08 (Bentler, 1990; Hoe, 2008; Zhang & Bartol, 2010).

While the main focus of this chapter is on data analysis and presentation of the study results, the next chapter focuses mainly on the discussion of those results within the context of the reviewed literature.

The chapter is organized as follows. It first assesses the dimensionality of variables, common method variance, reliability and validity of scales, convergent and discriminant validities, and normal distribution

of variables, respectively. These are followed by the presentation of descriptive statistics and the zero-order correlations of the study variables. The chapter then examines the hypothesized relationships by means of goodness-of-fit statistics/indicators and path analysis (causal modelling), followed by supplementary analyses and conclusions respectively.

4.2. Assessment of dimensionality and the common method variance

As indicated in the previous chapter, there is a possibility that common method biases may account for some explanations of results because data were collected from one source using the same research instrument (Podsakoff *et al*., 2012). In addition to the procedural steps explained in the previous chapter, the Harman's one-factor test was used to assess the presence of a common method bias. This test holds that the common method bias is a serious problem if one un-rotated factor emerges from the data analysis (Scott & Bruce, 1994). Furthermore, no single factor should account for more than 50 per cent of the variance in variables (Podsakoff, MacKensie, Lee, & Podsakoff, 2003).

The present study used the principal component factor analysis (varimax rotation) to derive factors from the data. Two main reasons justify the use of exploratory factor analysis (EFA) in this study. First, EFA was required to examine the dimensionality of the constructs because, to the best knowledge of the author of this thesis, the constructs have not been studied in the setting of this study (Naqshbandi *et al*., 2016). Second, EFA can be used to examine common method biases (Podsakoff *et al*., 2012).

The Kaizer-Meyer-Olkin (KMO) measure of sampling adequacy test indicated an adequate figure of 0.86 (which is better the threshold of 0.6), and the Bartlett's test of sphericity (X^2 = (820) = 4929.16, $p \leq 0.001$) was significant and hence acceptable. KMO and sphericity tests are often used to examine the degree to which exploratory factor analysis is applicable and suitable to responses given to variables, and hence provides support for factorisation of variables (Siebert & Kunz, 2016).

After deleting few items that had poor or multiple loadings, nine factors explaining over 70 per cent of variance emerged from EFA of items. No single factor explained more than 50 per cent of the variance in the analysis. When all items were constrained to one factor, the percentage of variance explained deteriorated to about 25 per cent. These results provide initial evidence that the common method variance was not a serious problem in this study (Scott & Bruce, 1994; Xerri & Brunetto, 2013).

To improve clarity on the derived factors, factor analyses results have been separated into those of predictor variables (Table 4.1) and those of outcome variables (Table 4.2).

Table 4.1: Exploratory factor analyses (EFA) of items of predictor variables

	Factor			
	1	**2**	**3**	**4**
My supervisor instils pride in me for being associated with her/him	**.802**	.185	.193	.053
My supervisor encourages me to look at problems from different angles	**.798**	.169	.162	-.024
My supervisor articulates a compelling vision for the future	**.776**	.166	.251	.165

My supervisor helps me develop my strengths	**.774**	.148	.216	.099
My supervisor paints an interesting picture about the future	**.770**	.156	.297	.160
My supervisor stimulates me to think about old problems in new ways	**.742**	.249	.127	.023
My supervisor acts in ways that build my respect	**.739**	.214	.328	.006
My supervisor indicates clearly what needs to be achieved	**.669**	.128	.282	-.023
My supervisor makes it clear what one can expect to receive when performance goals are achieved	**.667**	.123	.305	.083
My supervisor considers me as having different needs, abilities and aspirations form other employees	**.623**	.120	.013	.238
I am quite proud to be part of my organisation	.193	**.895**	.140	.135
I feel a strong sense of belonging to my organisation	.243	**.826**	.129	.079
I am quite proud to tell people who I work for	.197	**.812**	.119	.130
I can recommend a close friend to work for my organisation	.174	**.797**	.210	.186
I feel like 'part of the family' at my organisation	.193	**.647**	.371	.156
When decisions are made, my supervisor treats me with respect and dignity	.361	.177	**.764**	.006
All job decisions are applied consistently across all affected employees	.207	.227	**.755**	.158
To make decisions, my supervisor collects accurate and complete information	.381	.136	**.703**	.182
When making decisions about my job, my supervisor offers explanations that make sense to me	.321	.302	**.675**	-.006
I think that my level of pay is fair	.054	.255	.040	**.865**
Overall, the rewards I receive here are quite fair	.203	.194	.188	**.848**
Per cent of variance explained	29.13	18.01	13.96	8.36
Extraction Method: Principal Component Analysis. **Rotation Method**: Varimax with Kaiser Normalization. Rotation converged in 6 iterations.				

Four factors emerged from the factor analyses of predictor variables. Factor 1 refers to leadership (comprising of 8 items from transformational leadership and 2 items from contingent-reward form of transactional leadership). The convergence of items from transformational leadership and contingent-reward form of transactional leadership into one factor is not new for according to Yukl (1999: 287), 'supportive leadership reward behaviour loads on transformational leadership factor instead of the transactional factor'. Factor 2 refers to affective organisational commitment. The next two factors represent elements of organisational justice, with factor 3 representing procedural/interactional justice, and factor 4 representing distributive justice. As indicated in the previous chapter, no item was deleted from the items measuring any of the predictor and mediator variables.

Table 4.2 shows the results of factor analysis of items measuring outcome variables (OCB and IWB).

Table 4.2: Exploratory factor analyses (EFA) of items of outcome variables

	Factor				
	1	**2**	**3**	**4**	**5**
Introducing innovative ideas into the work environment in a systematic way	**.805**	.107	.070	.013	.066
Transforming innovative ideas into useful applications	**.798**	.232	.058	-.012	.022
Evaluating the utility of innovative ideas	**.790**	.163	.113	.018	-.010
Making important organisation members enthusiastic for innovative ideas	**.782**	.221	.108	.052	.114
Acquiring approval for innovative ideas	**.777**	.169	-.090	-.021	.036
Mobilizing support for innovative ideas	**.768**	.097	.033	.009	.042
Generating original solutions for problems	**.725**	-.057	.068	.187	.005

Creating new ideas for difficult issues	**.703**	.044	.063	.050	-.006
Wondering about how things can be improved in my organisation	**.580**	.016	.323	-.259	-.009
I volunteer for additional duties	.173	**.745**	-.095	.128	.188
I volunteer to help others who have heavy work loads	.128	**.730**	.134	-.101	.061
I volunteer to help others who have work-related problems	.101	**.725**	.284	-.052	-.108
I voluntarily do more than the job requires	.171	**.681**	.143	.109	.151
I try to avoid creating problems for co-workers ®	.108	.166	**.839**	-.004	.125
I take steps to prevent problems with co-workers ®	.136	.194	**.822**	.085	.048
I always find fault with what my organisation is doing	.098	.096	-.037	**.850**	.009
I consume a lot of time complaining about trivial things	-.005	-.039	.094	**.845**	-.012
I am always punctual at work	.048	.032	.107	-.084	**.876**
I do not take extra breaks from work	.051	.191	.046	.077	**.801**
Per cent of variance explained	27.34	12.50	8.88	8.45	8.01
Extraction Method: Principal Component Analysis. **Rotation Method**: Varimax with Kaiser Normalization. Rotation converged in 6 iterations. ® item is reverse-coded					

After omitting one item meant to measure creativity (idea generation), namely, 'searching out new working methods, techniques and instruments'; and two items meant to measure civic virtue dimension of OCB, namely, 'I attend and actively participate in meetings relating to my organisation' and 'I keep abreast of changes in my organisation', five factors emerged from the factor analysis of outcome variables. The first item was deleted because it loaded poorly in its factor, while the two other items were omitted because of multiple loadings.

While Factor 1 refers to IWB, the next four factors on the table represent OCB. Factor 2 refers to a combination of altruism and conscientiousness items. While the term 'volunteer' might have been responsible for the convergence of these items into one factor, another view has been suggested by Fassina, Jones, and Uggerslev (2008b). In contrast to the popular approach of combining altruism and courtesy items into OCB-I; and civic virtue, sportsmanship and conscientiousness items into OCB-O; Fassina *et al*. (2008*b*) categorise altruism, courtesy and conscientiousness into OCB-I. They argue that conscientiousness relates more to relational issues among team members, and less to directly assisting the organisation. Factors 3, 4 and 5 refer to courtesy, sportsmanship, and conscientiousness respectively. While the last two items of conscientiousness (indicative of punctuality, job dedication or personal industry) are often conceptualised as OCB constructs, recent work suggest that they are indicative of individual task proficiency (degree to which an employee meets known expectations and requirements of his or her role as an individual) (Carpini & Parker, 2017).

In general, the items meant to measure IWB (change-oriented OCB) loaded on a factor separate from the factors that tapped into OCB (affiliation-oriented OCB).

Having established the dimensionality of study variables and assessment of the common method variance, the next section presents information on the reliability and validity of variables.

4.3. Assessment of reliability and validity of study variables

Examining the reliability and validity of variables is a fundamental pre-requisite to data analysis and inference in multivariate analyses.

4.3.1. Assessment of reliability of variables

Reliability assesses the degree to which the scale accurately provides consistent measures (Cooper & Schindler, 2008; Hair, Black, Babin, Anderson, 2010). While there are many techniques designed to assess reliability (e.g. test-retest and split-half techniques), internal consistency is by far the most popular technique for assessing the scale reliability (Cooper & Schindler, 2008). Cronbach's alpha coefficient is often used as an estimate of the internal consistency of responses to different scale items in social sciences research (Finchilescu, 2013: 213). For this reason, the present study primarily used Cronbach's alpha coefficient to assess the scale reliability.

This alpha coefficient is calculated as follows (Finchilescu, 2013: 213):

$$r\alpha = \frac{n}{n-1}\left(1 - \frac{\sum \partial^2 j}{\partial^2}\right)$$

Where:

$r\alpha = Cronbach's\ alpha$

$\sum \partial^2 j = sum\ of\ the\ item\ variances$

$\partial^2 = variance\ on\ the\ total\ score\ on\ the\ scale$

$n = number\ of\ items$

Among other notable issues, the Cronbach's alpha formula suggests as follows:

a) The higher the number of items, the higher the reliability; and

b) The greater the variability in the scores, the better the reliability (Finchilescu, 2013: 213).

Nunnally (1978) has indicated that coefficients of 0.70 are adequate for research instruments. Consequently this study used this cut-off threshold to compare the reliability of variables calculated herein.

The Cronbach's alpha coefficients calculated in chapter 3 are summarised again in Table 4.3.

Table 4.3: Cronbach's alpha coefficients

Variable	Number of items	Cronbach's alpha (α)
Leadership	10	0.93
Organisational justice	6	0.83
Affective commitment	5	0.90
OCB	12	0.74
IWB	10	0.90

Based on Nunnally's cut-off point of 0.70, as shown in Table 4.3, all scales in the present thesis reached acceptable levels of internal consistency ranging from 0.74 to 0.93.

While reliability tests are required for reflective constructs, they are not mandatory for formative constructs (Diamantopoulus & Siguaw, 2006).

The research literature differentiates between two forms of latent constructs – reflective and formative constructs. While changes in a reflective latent construct are 'reflected or manifested in the observed indicators' (i.e. unobserved latent construct gives rise to its indicators), changes in observed indicators 'determine or cause changes in the value of the formative latent construct' (Diamantopoulus & Siguaw, 2006: 263). Put differently, while observed indicators are a function of a reflective construct, formative

construct is a function of its observed indicators (i.e. observed indicators define characteristics of a formative construct) (MacKenzie, Podsakoff & Podakoff, 2011). Essentially, while the removal or omission of an item in the reflective scale does not change the nature of the underlying construct; the omission of an observed indicator is tantamount to omission of part of the formative construct (Diamantopoulus & Winklhofer, 2001).

Since formative constructs are formed from a combination of different aspects, their indicators may not correlate well with each other (Diamantopoulus & Siguaw, 2006; MacKenzie, *et al.*, 2011), nor is it a requirement that they correlate. As a result, instead of using conventional factor analysis or reliability tests, multicollinearity tests are often recommended to assess the appropriateness of formative indicators (Diamantopoulus & Winklhofer, 2001).

Many variables used in the present study have been defined explicitly or implicitly as reflective constructs. While constructs 'are not inherently formative or reflective in nature…' (MacKenzie, *et al.*, 2011: 302), both leadership and IWB in this study have characteristics of formative constructs. For instance, changes in any one of the four dimensions of transformational leadership (idealised influence, individualised consideration, intellectual stimulation, or inspirational motivation) can increase or decrease the level of transformational leadership without associated increase or decrease in another dimension (MacKenzie, *et al.*, 2011); and apparently an omission in one dimension reduces what we consider transformational leadership. Similarly, it is reasonable that an increase or decrease in any one of the dimensions of IWB (creativity or innovation) can increase or decrease the level of IWB without associated changes in another dimension; and the omission of one of these variables may change the

entire nature of the concept. In other words, the observed indicators may define the characteristics of these constructs.

While both concepts have met the conventional reliability requirements in this study, they were also subjected to multicollinearity diagnostics to remove any objections related to the nature of the concepts.

With regard to leadership indicators, the Variance Inflation Factor (VIF) ranged from 1.556 to 4.080; and with regard to IWB indicators, VIF ranged from 1.120 to 2.853. These figures were far below the common cut-off threshold of 10, implying that multicollinearity was not a serious problem in the measurement of these variables (Diamantopoulos & Winklhofer, 2001).

Researchers have however warned that whether variables should be defined as reflective or formative should be based on theoretical grounds (MacKenzie, *et al.*, 2011). It is therefore indefensible to treat any variable as formative purely on data-driven consideration, for instance, if dimensionality or reliability of the scale is poor (Diamantopoulos & Siguaw, 2006). This caution was heeded in this study.

Having provided evidence that the present study relied on reliable measurements, the next section focuses on the validity of the variables, particularly the convergent and discriminant validities. This is because reliability is a necessary, but not a sufficient quality of measurement scales (Cooper & Schindler, 2008).

4.3.2. Assessment of convergent and discriminant validities

Validity refers to the degree to which a scale or instrument measures what it purports or is supposed to measure (Cooper & Schindler, 2008;

Hair *et al*., 2010). The research literature identifies different forms of validity.

Content validity refers to the degree to which the list of scale items or indicators represents the domain of the construct being measured (Hair *et al*., 2010; Finchilescu, 2013). This study not only used earlier validated scales with appropriate *face validity*, but it also ensured that the selected items covered all the dimensions of the construct being measured.

Criterion-related validity refers to the degree to which the scale relates to a criterion (outcome) variable at the present time (*concurrent validity*) and in the future (*predictive validity*) (Finchilescu, 2013). In pilot and primary studies, the variables used in this thesis have generally correlated adequately to variables to which they are theoretically supposed to relate.

Construct validity is the measure of the degree to which the theoretical construct assesses that which it purports to assess (Hair *et al*., 2010; Finchilescu, 2013). Convergent *validity*, *discriminant validity*, and *nomological validity* are components of construct validity (Anderson & Gerbing, 1988). While c*onvergent validity* assesses the degree to which the measures of one construct are related; *discriminant validity* assesses the extent to which the measures of different constructs are not related; and *nomological validity* refers to the extent to which a construct relates to other constructs (Anderson & Gerbing, 1988; Campbell & Fiske, 1959; Hair *et al*., 2010).

Even though the variables used in this study theoretically possess clear convergent and discriminant validities, confirmatory factor analysis (CFA) was conducted to confirm these properties.

Convergent validity was examined by examining whether each item had a statistically significant loading on its specified factor (Van Dyne & LePine, 1998). According to Anderson and Gerbing (1988), the *convergent validity* is established when the loading of an item on its path from its latent construct is significant, and the *discriminant validity* is established by comparing the unconstrained model to alternative models in which two latent constructs are constrained by setting their correlations equal to one (Lavelle *et al*., 2009).

Based on issues of relatedness and parsimony, the convergent and discriminant validities of the presumed predictors (leadership and organisational justice) and the mediator (organisational commitment) were assessed separately from those of citizenship or outcome variables (OCB and IWB).

The CFA of a four-factor model consisting of all items representing leadership, organisational justice (second order latent construct with two factors) and organisational commitment was estimated (Lavelle *et al*., 2009). Each item loaded significantly on its specified factor, and the model fit statistics were moderately high (X^2 (149) = 402.298, $p \leq 0.001$, NFI = 0.87, TLI = 0.90, CFA = 0.91, RSMEA = 0.088). Following the procedure recommended by Anderson and Gerbing (1988), the unconstrained model was compared with alternative models in which two latent constructs were constrained to one at the time, and in each case chi-square change difference (ΔX^2) was significant ($p \leq 0.01$). The above conditions respectively provide evidence of convergent validity and discriminant validity of predictor and mediator variables. When predictor and mediator variables were loaded onto one factor (Harman's one factor test), the model fit statistics were significantly lower (X^2 (152) = 1010.872, $p \leq 0.001$, NFI = 0.67, TLI = 0.66, CFA = 0.70, RSMEA = 0.160, ΔX^2 (3) =

608.574, $p \leq 0.001$). This again suggests that the common method variance (CMV) was not a serious problem among the predictor variables.

The above CFA approach was again adopted to examine the convergent and discriminant validities of citizenship variables (OCB and IWB). Even though the CFA of items indicated that all items tapping into IWB (excluding one item deleted in the EFA above) loaded significantly on the specified factor, several OCB items, especially those relating to factors 3 and 4 from EFA in Table 4.2 above, originally loaded weakly on their specified factors. After systematically and iteratively removing items that had weak, insignificant or cross loadings (e.g. based on verification of modification indices), seven OCB items that loaded significantly on their specified factors were retained (overall α = 0.74). After this process, the fit statistics of the unconstrained model approached acceptable and reasonable levels (X^2 (87) = 233.458, $p \leq 0.001$, NFI = 0.85, TLI = 0.87, CFA = 0.90, RSMEA = 0.09). Comparing the above model with alternative models in which two latent constructs were constrained by setting their correlations equal to one at the time (Lavelle *et al*., 2009) resulted in chi-square change differences (ΔX^2) that were significant ($p \leq 0.01$). These results again suggest that the examined citizenship behaviours (OCB and IWB) had reasonable convergent and discriminant validities.

When items tapping into the citizenship behaviours under review (OCB and IWB) were loaded onto one factor (Harman's one factor test), the model fit statistics became significantly lower (X^2 (104) = 458.464, $p \leq 0.001$, NFI = 0.71, TLI = 0.72, CFA = 0.76, RSMEA = 0.124, ΔX^2 (17) = 225.574, $p \leq 0.001$). This again provides evidence that the common method variance (CMV) was not a serious problem in the measurement of citizenship behaviours.

While CFA does well to assess convergent validity, Farrell and Rudd (2009) have suggested that CFA is not the best technique to assess the discriminant validity. As a result, a more stringent approach recommended by Fornell and Lacker (1981) was used to complement the CFA approach. The approach recommended by Fornell and Lacker (1981) involves calculating the average variance extracted (AVE) of each variable, and comparing it with shared variances (SV) between variables. AVE is the 'average amount of variation that a latent construct explains in the observed variables', and is calculated as the average of the squared path loadings (Farrell & Rudd, 2009: 3). Shared variance is 'the amount of variance that a variable explains in another variable', and is expressed as the square of a correlation coefficient between any two variables (Farrell & Rudd, 2009: 3). The discriminant validity is achieved when AVE ≥ SV, or in absolute terms, when AVE ≥ 0.50 (Hair *et al*., 2010; Farrell & Rudd, 2009). Table 4.4 shows AVEs, SVs, and composite reliabilities (CR) of the main variables.

Table 4.4: Average variance extracted (AVE), composite reliability (C.R.), and maximum shared variance (MSV) of the main variables

Variable	Dimension	AVE	1	2	3	4	5	6	7
leadership	1. Constructive Leadership	0.58	**0.93**	0.08	0.42	0.23	0.06	0.05	0.06
Justice	2. Distributive justice	0.71		**0.83**	0.11	0.20	0.01	0.00	0.01
	3. Interactional justice	0.58			**0.85**	0.30	0.04	0.01	0.02
commitment	4. Affective commitment	0.66				**0.91**	0.16	0.03	0.02
OCB	5. Helping-Volunteering	0.45					**0.71**	0.12	0.13
	6. Courtesy	0.59						**0.74**	0.07
	7. IWB	0.51							**0.89**

Notes: Bold numbers in the diagonal are composite reliabilities, and the numbers where the variables intersect are shared variances, calculated as the squared correlation between any two variables.

In general, Table 4.4 suggests that the indicators had more in common with their specified construct than with other constructs. As shown in the same table, with the exception of helping-volunteering dimension of OCB, the AVE was greater than 0.5 in each case, and more importantly, each AVE was greater than the maximum shared variances between constructs. Even though the AVE of helping-volunteering dimension of OCB (0.45) was slightly less than the cut-off point of 0.5, it was nonetheless greater than any shared variance between this variable and other variables. These results provide a more stringent and conservative evidence of discriminant validity of variables under study.

Having looked at the divergent and discriminant validity of variables, the next section presents another important assessment of variables before subjecting them to multivariate analysis – the assessment of normal distribution of variables.

4.4. Examination of the normal distribution of variables

Many statistical analyses assume that metric variables used are normally distributed (Rose, Spinks, & Canhoto, 2014). It is therefore important to assess the extent to which the variables deviate from normal distribution before such analyses are applied.

In addition to the visual inspection of individual shapes of distribution of variables using histograms and normality plots, statistical analyses may be carried out to examine the normal distribution of variables (George & Mallery, 2010, Hopkins & Weeks, 1990). For the purpose of this study, skewness, kurtosis and Kolmogorov-Smirnov (K-S) tests were used to examine the extent to which the main variables deviated from normal distribution. The results are shown in Table 4.5.

Table 4.5: Tests of normal distribution of the main variables

Variable	Skewness		Kurtosis		K-S	
	Statistic	Std Error	Statistic	Std Error	Statistic	Std Error
Leadership	-0.456	0.168	-0.747	0.334	1.309	0.065
Justice	-0.099	0.168	-0.285	0.334	0.850	0.465
Commitment	-0.329	0.166	-0.565	0.330	1.027	0.242
OCB	-0.231	0.170	0.177	0.339	0.906	0.384
IWB	-0.824	0.166	0.399	0.331	1.635	0.010

Skewness refers to the asymmetry of the distribution or its departure from symmetry (Hopkins & Weeks, 1990). A normally distributed variable has a skewness value of zero; a distribution with a tail extending to the right (right-skewed or positively skewed distribution) has a positive value; and a distribution with a tail extending to the left (left-skewed or negatively skewed distribution) has a negative value (George & Mallery, 2010)).

A number of rules of thumb have been advocated to interpret the skewness statistics. One such rule of thumb suggests 'that, a) if skewness is less than -1 or greater than 1, the distribution is considered highly skewed; b) if skewness is between -1 and -0.5 or between 1 and 0.5, the distribution is moderately skewed; and c) if skewness is between 0 and -0.5 or between 0 and 0.5, the distribution is approximately normally distributed'. Based on this general rule, the skewness values shown in Table 4.5 did not deviate problematically from normal distribution because all absolute values were less than 1 (Lavelle *et al*., 2009; Xerri & Brunetto, 2013). George and Mallery

(2010) have actually suggested that skewness values between -2 and +2 signify no problematic deviations from normality.

Kurtosis refers to the 'peakedness' of the distribution, or more appropriately, the measure of how flat the top of a symmetric distribution is when compared to a normal distribution of the same variance (Hopkins & Weeks, 1990: 723; Wuensch, 2016). Relatively flat-topped distributions are referred to as '*platykurtic*' (negative kurtosis); less flat-topped distributions as '*leptokurtic*' (positive kurtosis); and equally flat-topped distributions as '*mesokurtic*' (Hopkins & Weeks, 1990). Similar to skewness, kurtosis value of zero signifies normal distribution, and the higher the absolute value, the greater the kurtosis.

Another crude rule of thumb used for both skewness and kurtosis is to divide either score by its standard error, and to use a cut-off point of ±1.96 for small samples, and ±2.58 for large samples (Rose *et al*., 2014). In this case standardized figures for skewness and kurtosis for leadership and IWB (Table 4.5) provided conflicting values, with skewness values suggesting slight problems, while kurtosis values fell within expected standardized figures. This standardised measure is affected by the sample size, and as such, it should be complemented by other approaches, including the visual inspection and statistical tests such as Kolomogorov-Smirnov (K-S) test.

K-S tests examine the null hypothesis that data were derived from a population that is normally distributed, and hence rejecting the null hypothesis ($p \leq 0.05$) suggests rejecting the assumption of normally distributed data (Rose *et al*., 2014). With the exception of IWB variable, Table 4.5 suggests that null hypotheses could be accepted with regard to other variables, suggesting that most variables did not deviate significantly from normal distribution. K-S test should be read

with caution because, like X^2 test, it is sensitive to sample sizes such that it tends to be significant with large population sizes (Rose *et al*., 2014).

Taken together, the variables used in this study did not indicate problematic deviations from normality. However, even though the absolute measure of skewness of IWB |-0.824| was acceptable because it was below a cut-off point of 1, the square root of IWB was taken to reduce the concerns of deviation from normality that could be associated with the K-S test. It is however worth mentioning that using either the transformed or original variable did not materially alter the findings in this study (Pieterse *et al*., 2009).

Having assessed the reliability, validity and normal distribution of the main variables, the study next presents descriptive statistics and zero-order correlations before examining the model fit statistics and path relationships.

4.5. Descriptive statistics and zero-order correlations

Table 4.6 shows means, standard deviations and inter-correlations of study variables.

On a scale ranging from 0 to 4, Table 4.6 suggests that the IWBs of employees and the perceived leadership of their supervisors were on average just above mid-point (M = 2.68, SD = 0.78 and M = 2.28, SD = 0.08 respectively). On a slightly different scale ranging from 1 to 5, the average scores for both organizational commitment (M = 3.36, SD = 1.01) and OCB (M = 3.78, SD = 0.58) were also above mid-point. In terms of overall organizational justice, the average score was below the mid-point of 3 (M = 2.92, SD = 0.83), suggesting that on average the employees were not satisfied with how they were treated in their

organisations, particularly with regard to the distribution of salaries and rewards.

Table 4.6 further shows that leadership correlated positively and significantly with organizational justice (r = 0.64, $p \leq 0.01$), organizational commitment (r = 0.48, $p \leq 0.01$), OCB (r = 0.24, $p \leq 0.01$), and IWB (r = 0.25, $p \leq 0.01$). This pattern of correlations suggests that high levels of leadership were associated with high levels of perceived organizational justice, commitment, OCB and IWB; and vice versa. Similarly, organizational justice was positively and significantly associated with organizational commitment (r = 0.61, $p \leq 0.01$) and OCB (r = 0.25, $p \leq 0.01$); and correlated marginally but significantly with IWB (r = 0.14, $p \leq 0.05$). These imply that employees who perceived high levels of justice were likely to report high organizational commitment, OCB and IWB; and those who perceived low levels of justice were likely to report low affective commitment, OCB and IWB. Although the presumed mediator (organizational commitment) correlated positively and significantly with OCB (r = 0.42, $p \leq 0.01$), it correlated only slightly with IWB (r = 0.14, $p \leq 0.05$). These correlations suggest that high affective commitment was associated with high OCB, and to some extent, high IWB, and vice versa. The correlation between OCB and IWB was moderate (r = 0.42, $p \leq 0.01$), suggesting that the two concepts were related but distinct from each other.

Of the demographic variables, only gender and management level correlated significantly with OCB and IWB. Following the warning of Becker (2005) that the inclusion of unnecessary controls may bias estimates and reduce statistical power, the other control variables were excluded in subsequent analyses.

Table 4.6: Means, standard deviations and inter-correlations of variables

	Mean	SD	2	3	4	5	6	7	8	9	10
1. Gender	0.53	0.50	0.02	-0.04	0.14*	-0.02	0.09	015*	0.12	0.14*	0.13
2. Age	3.29	1.15	-	0.62**	0.33**	0.16*	0.04	-0.05	-0.04	0.03	-0.03
3. Tenure	8.63	7.98		-	0.22**	0.09	0.06	-0.14	-0.02	0.08	0.04
4. Education	5.11	1.00			-	0.13	-0.13	-0.13	-0.09	0.01	-0.01
5. MGT level	0.74	0.95				-	0.03	0.04	0.07	0.11	0.29**
6. Leadership	2.28	0.08					(0.93)	0.64**	0.48**	0.24**	0.25**
7. Justice	2.92	0.83						(0.85)	0.61**	0.25**	0.14*
8. Commitment	3.36	1.01							(0.90)	0.42**	0.14*
9. OCB	3.78	0.58								(0.73)	0.42**
10. IWB	2.68	0.78									(0.90)

Notes: *Significant at 0.05; **Significant at 0.01. Cronbach's alphas, where applicable, are shown in parenthesis

4.4. Hypotheses testing

The analysis of moment structures (*AMOS* version 24) structural equation modelling (*SEM*) software was used to test the structural relations between variables. SEM was chosen as the main model for analysis for at least three reasons. Firstly, unlike other multivariate techniques that can examine only a single relationship at the time (Hair *et al*., 2010), SEM can simultaneously test relationships between many variables in a hypothesised model, and can thus help assess the degree to which the model is consistent with data (Hoe, 2008; Zhang & Bartol, 2010). Because the model tested in this study (Figure 4.1) consists of relatively complex relationships among variables, SEM was deemed appropriate to fit the model to data. Secondly, SEM is appropriate in cases where, as is the case in this study, 'the pattern of inter-relationships among the study constructs are specified *a priori* and grounded in established theory' (Hoe, 2008: 76). Thirdly, SEM allows for the bootstrapping procedure to test significant levels for direct and indirect effects (Chen *et al*., 2013; Lehmann-Willenbrock *et al*. 2013). Bootstrapping was deemed appropriate to test for the mediation and indirect effects presumed in Figure 4.1.

4.4.1. Model fit indictors

In line with the recommendation that multiple model fit indicators should be used to assess model fit (Hoe, 2008; Hooper, Coughlan, & Mullen, 2008), this study reports Chi-square ($\boldsymbol{X^2}$), normed fit index (*NFI*), comparative fit index (*CFI*), Tucker-Lewis index (*TLI*), relative fit index (RFI), and root mean square error of approximation (*RMSEA*) to examine the extent to which the hypothesised model fitted data well. The model fit indicators are shown in Table 4.7.

Table 4.7: Model fit statistics

	X^2	*df*	X^2/df	*NFI*	*CFI*	*TLI*	*RFI*	*RMSEA*
Model 1 (hypothesised model)	**20.889**	**13**	**1.61**	**0.940**	**0.975**	**0.947**	**0.870**	**0.053**
Model 2: Direct paths from leadership and justice to IWB, partially mediated by commitment and OCB (β = 0.157, p ≤ 0.05; and β = 0.02, p ≥ 0.05 respectively)	**14.380**	**12**	**1.20**	**0.950**	**0.993**	**0.983**	**0.903**	**0.030**
Model 3: Direct path from leadership to IWB, no mediation (β = 0.157, p ≤ 0.05)	21.085	13	1.62	0.939	0.975	0.945	0.869	0.053
Model 4: Direct paths from commitment, leadership and justice to OCB (β = 0.39, p ≤ 0.05; β = 0.09, p ≥ 0.05; and β = -0.06, p ≥ 0.05 respectively)	134.763***	14	9.63	0.612	0.622	0.243	0.224	0.198
Model 5: Direct paths from commitment to OCB and IWB (β = 0.37, p ≤ 0.05 and β = 0.10, p ≥ 0.05 respectively)	67.021***	13	5.16	0.809	0.833	0.640	0.589	0.137
Model 6: (Distributive justice dimension)	23.802*	12	1.98	0.904	0.946	0.874	0.775	0.067
Model 7: (procedural/interactional justice dimension)	21.498*	12	1.79	0.938	0.970	0.930	0.854	0.060
Model 8: (Leadership and interactional justice combined into supervisor support construct)	17.314*	9	1.92	0.913	0.953	0.891	0.797	0.065
Model 9: (OCB and IWB combined into one citizenship construct)	16.592	9	1.84	0.939	0.970	0.929	0.858	0.062
Notes: *Significant at 0.05 level; **Significant at 0.01 level, *** Significant at 0.001 level								

As shown in Table 4.7, the hypothesized mediated model (Figure 2.1) fitted the data reasonably well ($\boldsymbol{X^2}$ = (13) = 20.889, $p \geq 0.05$; *NFI* = 0.940, *CFI* = 0.975, *TLI* = 0.947, *RMSEA* = 0.053). Chi-square ($\boldsymbol{X^2}$) is not a reliable indicator of model fit because of the well-documented evidence that it depends on sample size in such a manner that in large sample sizes it becomes significant even when the model fits data well (Podsakoff *et al*., 1990). The relative or normed X^2 (X^2/df) has been advocated to minimize the impact of sample size on this model fit statistic (Hooper *et al*., 2008). Based on recommended cut-off ratio of 2 (sometimes 3), the hypothesised model (Figure 2.1.) fitted the data reasonably well (Hooper *et al.*, 2008).

Consistent with Anderson and Gerbing's (1988) suggestions, alternative plausible models on the basis of theory were evaluated (Zhang & Bartol, 2010).

Table 4.7 suggests that the modified hypothesised model (model 2) in which the effects of leadership on IWB were partially mediated in series by affective commitment and OCB ($\boldsymbol{X^2}$ = (12) = 14.380, $p \geq 0.05$; *NFI* = 0.950, *CFI* = 0.993, *TLI* = 0.983, *RMSEA* = 0.030) fitted data slightly better than the hypothesised model (ΔX^2 (1) = 6.509, $p \leq 0.05$).

Though the hypothesised model fitted data significantly better than model 3 in which leadership had direct effects on IWB ($\boldsymbol{X^2}$ = (13) = 21.085, $p \geq 0.05$; *NFI* = 0.939, *CFI* = 0.975, *TLI* = 0.945, *RMSEA* = 0.053), the differences (if any) were not statistically significant (ΔX^2 (0) = 0.196, $p \geq 0.05$). However, the modified hypothesised model (model 2) fitted data significantly better than model 3 (ΔX^2 (1) = 6.705, $p \leq 0.01$).

The hypothesised model (model 1) and its modified version (model 2) fitted data better than model 4 ($\boldsymbol{X^2}$ = (14) = 134.763, $p \leq 0.001$; *NFI* = 0.612, *CFI* = 0.622, *TLI* = 0.243, *RMSEA* = 0.198); with changes in chi-square quite significant in each case (ΔX^2 (1) = 113.874, $p \leq 0.001$, and ΔX^2 (2) = 120.383, $p \leq 0.001$ respectively). Note that model 4 represents what Fassina *et al*. (2008*a*) termed direct effects model. Thus contrary to the finding of Fassina *et al*. (2008*a*), this study found that the mediated model fitted data better than the direct effects model.

The hypothesised model and its modified version also fitted data significantly better than model 5 in which affective commitment was related directly to both OCB and IWB ($\boldsymbol{X^2}$ = (13) = 67.021, $p \leq 0.001$; *NFI* = 0.809, *CFI* = 0.833, *TLI* = 0.640, *RMSEA* = 0.137). As formative indicators of an overall performance concept (MacKenzie, Podsakoff, & Podsakoff, 2011*b*), it can be argued that affective commitment affects both focal constructs directly. This theoretical possibility is ruled out because the present results support the hypothesised notion that OCB may mediate the relationship between organisational commitment and IWB.

As two dimensions of organisational justice which may evoke different employee behaviours based on the source or target of justice (i.e. target-similarity effects or agent-system model of justice, Lavelle *et al.,* 2009; Fassina *et al*., 2008*b*), model 6 ($\boldsymbol{X^2}$ = (12) = 23.802, $p \leq 0.05$; *NFI* = 0.904, *CFI* = 0.946, *TLI* = 0.874, *RMSEA* = 0.067) and model 7 ($\boldsymbol{X^2}$ = (12) = 21.498, $p \leq 0.05$; *NFI* = 0.938, *CFI* = 0.970, *TLI* = 0.930, *RMSEA* = 0.60) are theoretically justified. While the differences between these models and the hypothesised model were not statistically significant, the results indicate that there was no

mileage gained by separating the two justice concepts as the indicators in models 6 and 7 deteriorated slightly.

It can finally be argued that models 8 (X^2 = (9) = 17.314, $p \leq 0.05$; *NFI* = 0.913, *CFI* = 0.953, *TLI* = 0.891, *RMSEA* = 0.065) and 9 (X^2 = (9) = 16.592, $p \geq 0.05$; *NFI* = 0.939, *CFI* = 0.970, *TLI* = 0.929, *RMSEA* = 0.062) in which supervisor fairness (interactional justice) and leadership were combined into the supervisor-support concept (Cronbach's α = 0.94), and OCB and IWB were combined into the overall citizenship behaviour/performance (Cronbach's α = 0.86) concept respectively, also fitted data reasonably well.

George and Zhou (2007) found that trust, supervisor feedback and interactional justice were nested under a more general supervisor-support factor, and Chiaburu, Lorinkova and Van Dyne (2013) have suggested the utility of including predictors across the social context (leader, co-worker and organisational support) to predict change-oriented OCB. It also is known that OCB and IWB are elements of the overall citizenship behaviour/performance (Janssen, 2000, Harari *et al*., 2016); or put in other words, OCB and IWB are formative dimensions of a construct known as overall performance (MacKenzie *et al*., 2011*b*). Notwithstanding these plausible theoretical underpinnings, the hypothesised model (or at least its modified version) fitted data better than models 8 and 9 ($\Delta X^2 \leq 0.05$).

Taken together, the results show that the hypothesised model (and its modified version) fitted data better than other theoretically possible models. The hypothesised model was retained for at least two other reasons. First, the exploratory factor analyses (EFA) results shown in Tables 4.1 and 4.2 suggest that the focal constructs in the hypothesised model are distinct variables. Farrell and Rudd (2009) have recommended that researchers should conduct EFA before they

conduct the CFA and path analysis. Second, Table 4.6 suggests that OCB and IWB relate differently with other variables; thus justifying the conceptual distinction between these outcome variables (Organ *et al*., 2006). As suggested by Fassina *et al*. (2008*a*: 180), the amalgamation of distinct variables/dimensions (parsimony) may come at the cost of accuracy in the presentation of relationships among variables, and the resultant multiple ways in which managers might promote different outcomes. The current study holds that it would not be prudent to achieve parsimony at the cost of nuanced relationships that may help advance theory and practice.

4.4.2. Path analysis

Having presented the model fit indicators; the next logical step involves analysing path relationships between the variables. This is important to address the specific hypotheses outlined in chapter 2 (to be discussed subsequently).

Table 4.8 and Figures 4.1 and 4.2 show regression coefficients between the variables of the hypothesised model.

Table 4.8: Standardised regression coefficients

HYPOTHESISED MODEL		
	Estimate (β)	**S.E**
Leadership ⟶ Commitment	0.177**	0.065
Justice ⟶ Commitment	0.503***	0.083
Commitment ⟶ OCB	0.385***	0.031
OCB ⟶ IWB	0.393***	0.091

Gender ⟶ OCB	0.121*	0.063
Gender ⟶ IWB	0.062	0.093
Management level ⟶ IWB	0.239***	0.049
HYPOTHESISED MODEL - MODIFIED		
Leadership ⟶ Commitment	0.177**	0.065
Justice ⟶ Commitment	0.53***	0.083
Commitment ⟶ OCB	0.385***	0.031
OCB ⟶ IWB	0.359***	0.091
Gender⟶ OCB	0.122*	0.063
Gender⟶ IWB	0.051	0.091
Management level ⟶ IWB	0.236***	0.048
Leadership⟶ IWB	0.157**	0.048
Notes: *Significant at 0.05 level; **Significant at 0.01 level, *** Significant at 0.001 level		

In sum, Table 4.8 and figures 4.1 and 4.2 show significant path relationships between the focal constructs.

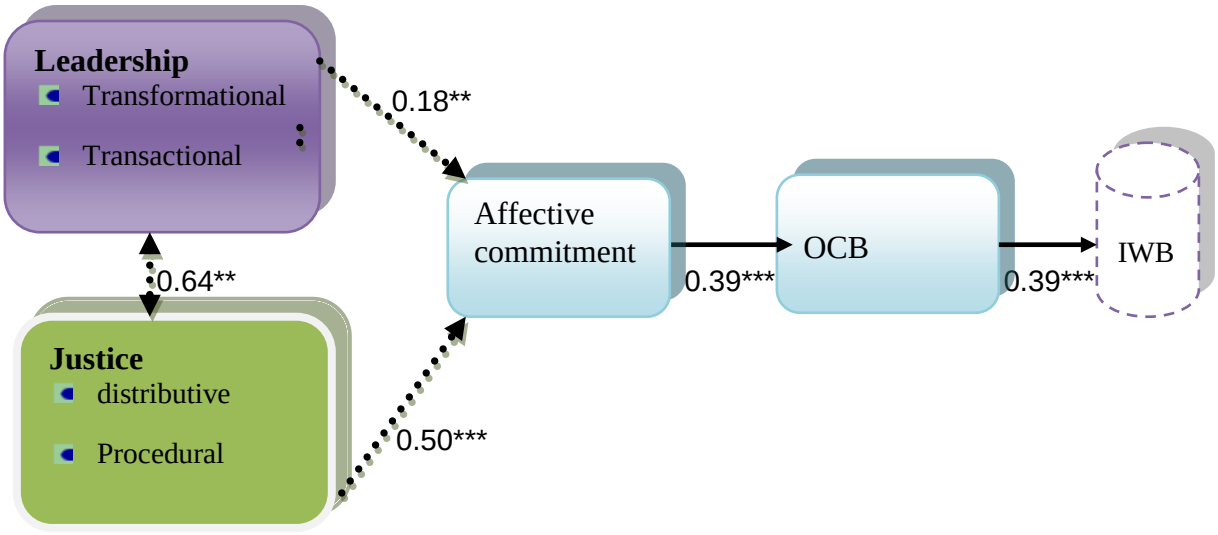

Figure 4.1: Hypothesised path diagram

Notes: *OCB = organizational citizenship behaviour; IWB = innovative work behaviour.* *Significant at 0.05 level; **Significant at 0.01 level, *** Significant at 0.001 level. Non-core and non-significant relationships are not shown for the sake of parsimony.

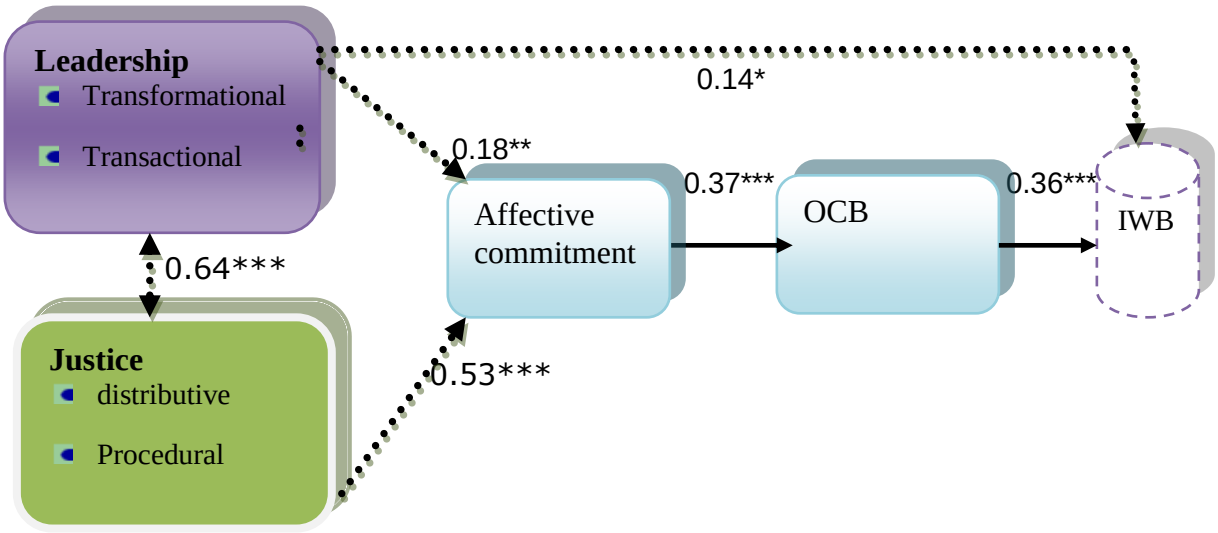

Figure 4.2: Hypothesised modified path diagram

Notes: *OCB = organizational citizenship behaviour; IWB = innovative work behaviour.* *Significant at 0.05 level; **Significant at 0.01 level, *** Significant at 0.001 level. Non-core and non-significant relationships are not shown for the sake of parsimony.

Figure 4.1 and hypotheses 3 and 9 also require the examination of the indirect (mediation) effects. To examine indirect (mediation) effects, in addition to Sobel tests, this study employed the bootstrapping method recommended by Preacher and Hayes (2004). A three-path meditational model with two mediators in series (commitment and OCB) was specified (Lehmann-Willenbrock *et al*. 2013).

Compared to the product of coefficients approach, causal steps approach of Baron and Kenny (1986), and Sobel tests, bootstrapping is recommended because it a) has stronger statistical power, b) provides the bias-corrected intervals that may be appropriate for data that is not normally distributed, and c) provides significant levels for direct and indirect effects (Chen *et al*., 2013; Koseoglu, Liu, & Shalley, 2017; Lehmann-Willenbrock *et al*. 2013).

This study bootstrapped the sample 1 000 times because previous simulated studies have found that bootstrapping 1 000 times provides parameter estimates that deviate from the true value by less than 5% (Chen *et al*., 2013). Note that unstandardized estimates (and not standardized ones) are used in mediation analysis to examine indirect effects (Preacher and Hayes, 2004; Lehmann-Willenbrock *et al*. 2013).

The estimates of indirect effects, their level of significance, and associated confidence intervals are shown in Table 4.9.

Table 4.9: Results of indirect effects

	Indirect effect estimate	90% Confidence interval (CI)	
Relationship	Unstandardized (Standardized)	Lower bound	Upper bound
Commitment → OCB → IWB	0.166**(0.153**)	0.076	0.164
Leadership → commitment → OCB	0.033*(0.070*)	0.009	0.059
Justice → commitment → OCB	0.122**(0.199**)	0.084	0.176
Leadership → commitment → OCB → IWB	0.020*(0.027*)	0.006	0.037
Justice → commitment → OCB → IWB	0.072**(0.077**)	0.048	0.111
Notes: *Significant at 0.05 level – 2-tailed; **Significant at 0.01 level – 2-tailed. Standardized indirect effects are shown in parentheses. CI is for unstandardized indirect effects			

Table 4.9 suggests some interesting, albeit expected results on indirect effects.

First, as confirmed by the two-tailed significance level of indirect effects ($\beta = 0.166$, $p \leq 0.01$), and the confidence interval that does not overlap zero (CI: 0.076, 0.164), Table 4.9 suggests that affective commitment had indirect effects on IWB through OCB.

Second, Table 4.9 further indicates that leadership had indirect effects on OCB through affective commitment ($\beta = 0.033$, $p \leq 0.05$) - mainly confirmed by the two-tailed significance level and the confidence interval that does not overlap zero (CI: 0.009, 0.059). Signifying the hypothesised successive mediation, as suggested by the indirect effects with two-tailed significance level and confidence interval that

does not overlap zero (CI: 0.006, 0.037), leadership also had indirect relationships with IWB through affective commitment (first mediator) and OCB (second mediator) in series (β = 0.020, $p \leq 0.05$).

Last, Table 4.9 suggests stronger results with regard to organisational justice. More specifically, it shows that organisational justice had indirect effects on OCB through affective commitment (β = 0.122, $p \leq 0.01$), and as in earlier cases, confirmed by the two-tailed significance level and the confidence interval that does not overlap zero (CI: 0.084, 0.176). Similarly, the indirect effect of organisational justice on IWB through affective commitment (first mediator) and OCB (second mediator) was revealed by the two-tailed significance level of indirect effects (β = 0.077, $p \leq 0.01$), and confidence interval that does not overlap zero (CI: 0.048, 0.111).

Overall, the indirect effects were all significant as expected. The results relating to each hypothesis are discussed next.

Hypothesis 1 predicted that OCB would be positively and significantly associated with IWB. As shown in Table 4.8, the structural path between OCB and IWB was positive and significant (β = 0.36, $p \leq 0.001$). This result implies that high levels of OCB were associated with high levels of IWB, and vice-versa. More specifically, one standard deviation increase in OCB was associated with 0.36 standard deviation increase in IWB. This result also indicates that OCB explained about 13% variance in IWB. Thus hypothesis 1 was supported.

Hypothesis 2 predicted that there would be a positive relationship between organisational commitment and OCB. Table 4.8 indicates the significant relationship between organisational commitment and OCB (β = 0.39, $p \leq 0.001$). This result suggests that high levels of affective commitment were associated with high levels of OCB, and

vice-versa. More specifically, per standard deviation increase in affective commitment, there was 0.39 standard deviation increase in OCB. This result also indicates that OCB explained about 15% variance in OCB. Thus hypothesis 2 was supported.

Hypothesis 3 predicted that OCB would mediate the relationship between organisational commitment and IWB. The fact that the structural paths between organisational commitment and OCB (β = 0.39, $p \leq 0.001$) on one hand, and OCB and IWB (β = 0.36, $p \leq 0.001$) on the other hand were significant, while that between organizational commitment and IWB was not significant (β = 0.10, $p \geq 0.05$); suggests indeed that OCB mediated the relationship between OCB and IWB. This is further supported by the fact that the data on the mediated model (Figure 2.1) fitted data better than alternative models. More specifically, the results of Sobel test suggest that the relationship between organisational commitment and IWB was significantly mediated by OCB ($z = 4.55$, $p \leq 0.001$). More importantly, the bootstrapping results indicate the significant indirect effect of affective commitment (through OCB) on IWB (β = 0.17, $p \leq 0.01$). In sum, all indicators suggest that hypothesis 3 was fully supported.

Hypothesis 4 predicted that there would be a positive relationship between leadership and organisational commitment. Though the relationship between leadership and organisational commitment was relatively small (β = 0.18, $p \leq 0.05$), it was nonetheless statistically significant at 95 per cent confidence level. The result suggests that high levels of leadership were associated with high levels of affective commitment, and vice-versa. More specifically, per standard deviation increase in perception of effective leadership, affective commitment increased by about 0.18 standard deviations. The result also suggests

that leadership explained about 3% variance in affective commitment in the present study. Hypothesis 3 was hence supported.

Hypothesis 5 predicted that there would be a positive relationship between organisational justice and organisational commitment. As predicted, the structural path between organisational justice and organisational commitment was positive and significant ($\beta = 0.53$, $p \leq 0.05$). This relationship was actually the largest relationship of those hypothesized. This relationship suggests that high levels of organisational justice were associated with high levels of affective commitment, and vice-versa. More specifically, one standard deviation increase in organisational justice was associated with 0.53 standard deviation increase in affective commitment. This result further indicates that organisational justice explained about 28% variance in affective commitment. Hypothesis 5 was hence fully supported.

Hypothesis 6 predicted that organisational commitment would mediate the relationship between OCB and (a) leadership and (b) organisational justice. The fact that the structural paths between leadership and organisational commitment on one hand ($\beta = 0.18$, $p \leq 0.05$), and organisational commitment and OCB on the other hand ($\beta = 0.36$, $p \leq 0.01$) were significant, while that between leadership and OCB was not significant ($\beta = 0.09$, $p \geq 0.05$) when both leadership and organisational commitment have been entered simultaneously in the model, provide evidence of a significant mediation of organisational commitment between leadership and OCB. Similarly, The fact that the structural paths between organisational justice and organisational commitment on one hand ($\beta = 0.53$, $p \leq 0.001$), and organisational commitment and OCB on the other hand ($\beta = 0.36$, $p \leq 0.01$) were significant, while that between organisational justice and OCB ($\beta = -0.06$, $p \geq 0.05$) was not significant when both leadership

and organisational commitment have been entered simultaneously in the model, provide evidence of a significant mediation of organisational commitment between organisational justice and OCB.

More concretely, the results of Sobel tests suggest that organisational commitment significantly mediated the relationships between leadership and OCB ($z = 4.24$, $p \leq 0.001$); and between organisational justice and OCB ($z = 5.03$, $p \leq 0.001$) respectively. Similar evidence is provided by the more reliable bootstrapping approach (Chen *et al*., 2013). The results of bootstrapping in Table 4.9 indicate the significant indirect effects of a) leadership (through commitment) on OCB ($\beta = 0.03$, $p \leq 0.05$); and b) organisational justice (through commitment) on OCB ($\beta = 0.12$, $p \leq 0.05$). In summary, all indicators suggest that hypothesis 6 was fully supported.

Hypothesis 7 predicted that there would be a direct positive relationship between leadership and OCB. Table 4.8 suggests the non-significant relationship between the two focal constructs ($\beta = 0.09$, $p \geq 0.05$), especially after controlling for the relationship between organisational commitment and OCB. It may be that where effective mediators exist, there is no direct relationship between leadership and OCB. Thus hypothesis 7 was not supported.

Hypothesis 8 predicted that there would be a direct positive relationship between organisational justice and OCB. Table 4.8 suggests the non-significant relationship between the two focal constructs ($\beta = -0.06$, $p \geq\leq 0.05$), especially after controlling for the relationship between organisational commitment and OCB. It may be that, as suggested by Lavelle *et al*. (2009), the effects of organisational justice OCB are mediated by organisational commitment.Thus hypothesis 8 was also not supported.

At this juncture it is important to remember that this study postulated hypotheses 7 and 8 to examine if the direct effects model (especially the direct effects of organisational justice to OCB) would be superior to the hypothesised mediated model (Fassina *et al*., 2008*a*). The model fit indicators and the path analyses results suggest that the mediated model (model 1 in Table 4.7) fitted data better than the direct effects model (model 4 in Table 4.7). Thus contrary to the findings of Fassina *et al*. (2008*a*), this study supports the mediated model, and not the direct effects model.

Hypothesis 9 predicted that organizational commitment and OCB would successively mediate the positive relationships between a) leadership and IWB, and b) organisational justice and IWB. The results support full successive mediation with regard to organisational justice, and partial successive mediation with regard to leadership. This is supported by the fact that model 2 (modified hypothesised model) in which the effects of both leadership and organisational justice were mediated in series by organisational commitment and OCB, but with some significant relationship between leadership and IWB (0.14, $p \leq 0.05$) fitted the data better than all theoretically possible models in Table 4.7. More importantly, the bootstrapping results indicate the significant indirect effects of leadership (through commitment and OCB) on IWB ($\beta = 0.02$, $p \leq 0.05$); and of organisational justice (through commitment and OCB) on IWB ($\beta = 0.07$, $p \leq 0.05$). While these indirect effects were arguably small because of the 2-step mediation process, they were significant nonetheless. In summary, all indicators suggest that hypothesis 9 was supported.

This 2-step mediated relationship is, from a theoretical and empirical standpoint, central to explaining how leadership and organisational

justice relate to IWB, and is by far the most significant contribution of this study to existing literature.

4.4.3. Exploratory research questions

To respond to exploratory questions 1 and 2, this study calculated Steiger's (1980) - z scores to evaluate the differences of how creativity and innovation related to other variables. Steiger's test (a.k.a. as a test for correlated correlations) evaluates the significance of the difference between any two correlations. The results are shown in Table 4.10.

Table 4.10: Differences of correlations of other variables with innovation and creativity

Variable	Innovation	Creativity	Steiger's *z*-score	p-value of differences
Leadership	0.280**	0.138*	2.64	0.008
Justice	0.181**	0.014	3.07	0.002
OCB	0.421**	0.316**	2.06	0.039
Commitment	0.176**	0.024	2.84	0.004
Notes: *Correlation is significant at 0.05, 2-tailed; **Significant at 0.01, 2-tailed.				

In aggregate Table 4.10 indicates that all presumed predictor variables had stronger relationships with innovation, while having relatively lower correlations with creativity.

The highest differences were with regard to organizational justice (z = 3.07, p = 0.002), and organizational commitment (z = 2.84, p = 0.004). Note that in the above two cases, while the correlations with

innovation were significant, the correlations with creativity were not significant.

Even though leadership correlated significantly with both innovation and creativity, the differences between the two correlations were significant (z = 2.64, p = 0.008).

The smallest, but yet statistically significant difference related to the correlation between OCB and innovation on one hand, and OCB and creativity on the other hand (z = 2.06, p = 0.039).

In summary, compared to correlations between creativity and the studied predictors, innovation had significantly (statistically) higher correlations with the same predictors.

4.5. Supplementary analyses

As indicated in earlier sections of this study, another exploratory aspect of this study was to examine the types of OCB that may facilitate IWBs in organisations. To explore this issue, answers to open-ended questions were used to provide useful, albeit preliminary directions. More specifically, as elaborated in the methodology section, participants were prompted to think of instances (examples) of helpful job behaviours which they frequently perform, but that are neither specifically part of their job description nor rewarded in their organizations (OCBs). Three researchers independently categorised and coded respondents' OCBs as either OCB-I or OCB-O. Other coded categories included those who did not provide answers (or gave non-behavioural or ambiguous answers), and those who gave answers reflecting both OCB-I and OCB-O as indicated previously. To simplify the analysis of findings, descriptive statistics (Means) and ANOVA tests were computed to examine the mean differences of OCB types across IWBs. To further facilitate comparisons and preliminary conclusions,

the summary also includes the results of pilot sample studies on the same question (See details in appendix 1). The results are summarised in Table 4.11, and the Tukey post-hoc multiple comparisons with associated effect sizes are detailed in appendix 3.

Table 4.11: IWB marginal means for each OCB type

Sample	None	OCB-I	OCB-O	OCB-I and OCB-O	F-Static
Primary study	2.69	2.57	2.70	2.83	0.847
Pilot sample 1	2.80	2.97	3.15	3.35	4.25**
Pilot sample 2	2.90	2.78	1.98	3.30	2.65*
Pilot sample 3	2.76	2.47	2.74	3.07	1.35
Notes: *F is significant at 0.05 level, **F is significant at 0.01 level					

As shown in Table 4.11 and illustrated in Figure 4.3, although the F-statistic does not show significant differences across the four coded OCB types, those who balanced OCB-I and OCB-O nonetheless reported the highest average engagement in IWB.

While the mean differences of OCB types across IWBs in the primary study were not statistically significant, they were in the expected direction and magnitude in relative terms.

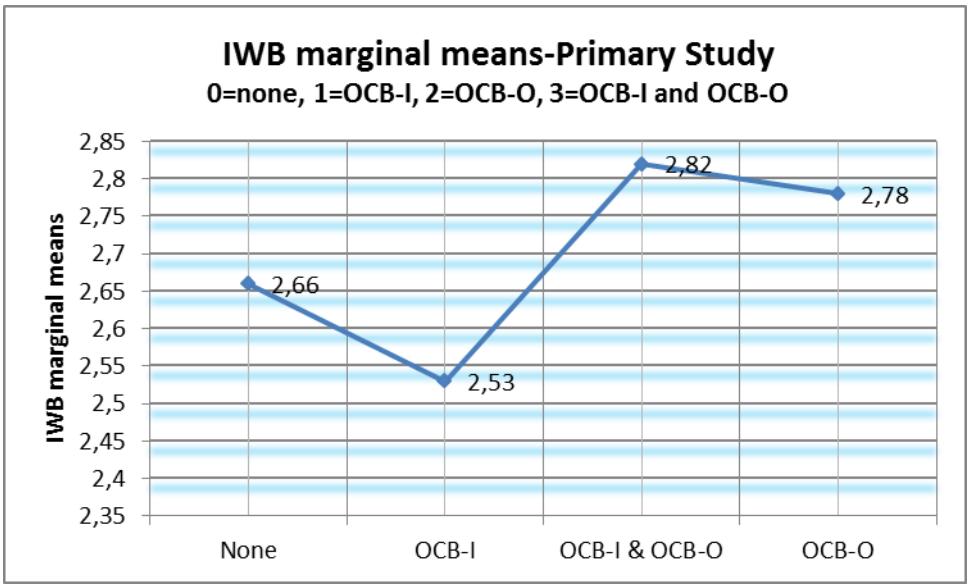

Figure 4.3: IWB means across OCB types in the primary study

Interestingly, as shown in Table 4.11 and illustrated in Figure 4.4, the respondents of pilot study sample 1 (n = 95) reported significant mean differences of OCB types across IWB as suggested by the significant F-statistic. More importantly, respondents who reported engaging in both OCB-I and OCB-O (balanced OCB) also reported the highest average IWBs.

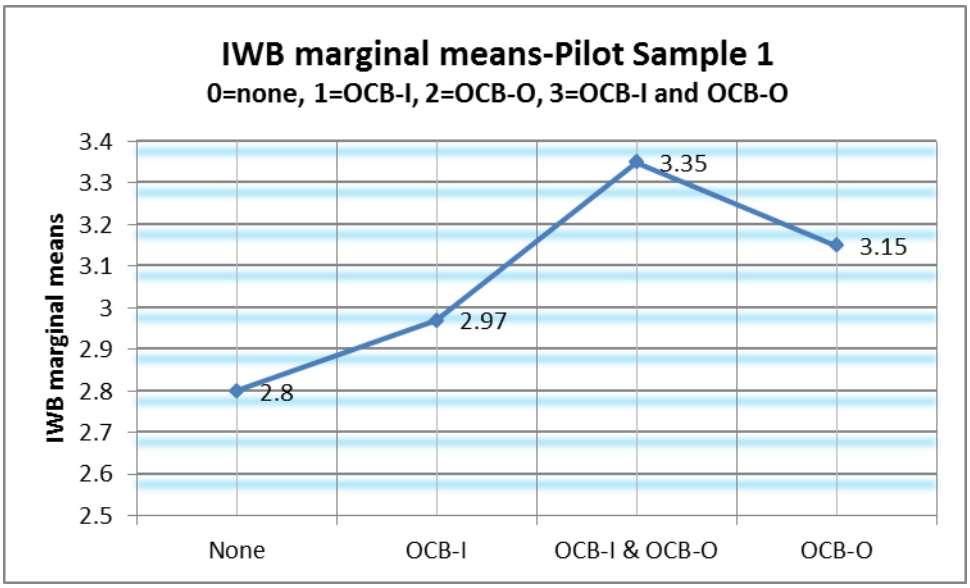

Figure 4.4: IWB means across OCB types in the pilot study sample 1

More or less the same pattern of results in pilot study sample 2 were repeated in pilot study sample 3 (n = 50). As shown Table 4.10 and graphed in Figure 4.5, the mean differences of OCB types across IWBs were not only significant, but also more importantly, respondents who engaged in OCB-I and OCB-O (balanced OCB) reported the highest average engagement in IWBs.

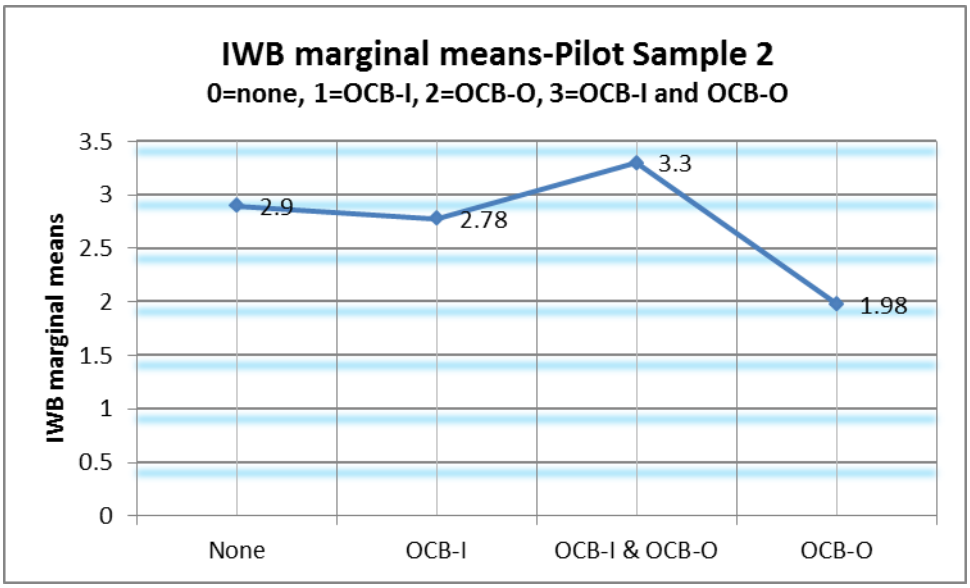

Figure 4.5: IWB means across OCB types in the pilot study sample 2

The last evidence this thesis provides to support the conjecture that balanced OCBs may result in high IWB relates to pilot study sample 3. Even though the differences between figures shown in Table 4.11 and graphed in Figure 4.6 were not statistically significant (insignificant F-statistic), employees who reported engaging in both OCB-I and OCB-O reported the highest average engagement in IWBs.

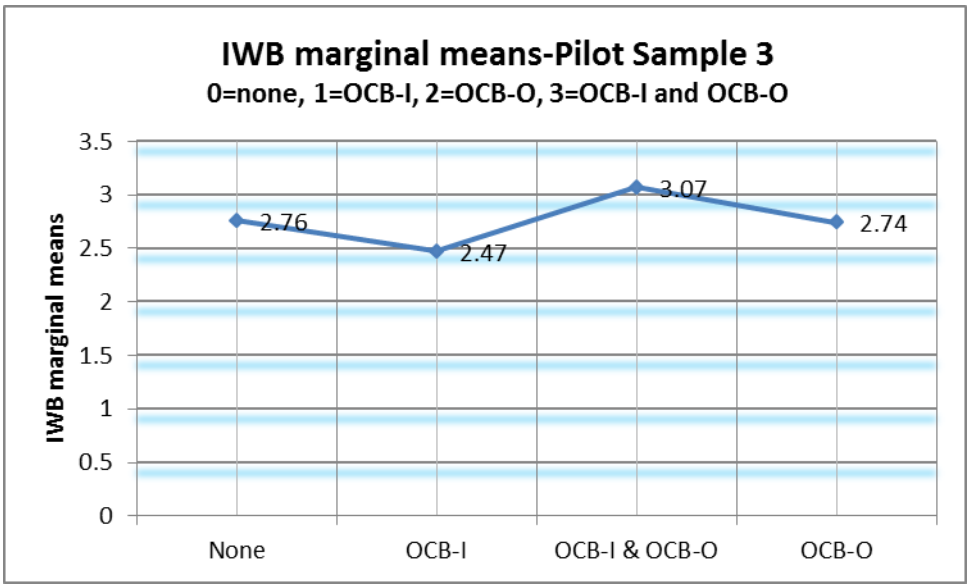

Figure 4.6: IWB means across OCB types in the pilot study sample 3

In summary, even though the pattern of the results across the primary study and its pilot samples were not precisely the same, while preliminary, one thing stands out – the respondents who engaged in both OCB-I and OCB-O recorded the highest average of IWBs. This result remained consistent across different samples; including the sample of primary teachers; high school teachers, public sector and private sector employees; and the larger sample comprising of university lecturers, university non-academic employees, public sector and private sector employees.

While the results might have been affected by small numbers in the pilot study samples, as reported in Khaola and Coldwell's (2017*a*) study where the pilot study samples were combined into a larger sample, striking a balance between OCB types may facilitate engagement in IWBs, and is certainly worth future focus by researchers.

4.6. Conclusions

The aim this chapter was to analyse data and present the results that address the research problems, questions, and hypotheses.

Because no descriptive cross-sectional quantitative study of this nature has been conducted in the setting of the present study before, the explorative factor analysis (principal component factor analysis) was deemed necessary to assess the dimensionality of the variables. Overall, the study confirmed the dimensionality of the variables, and that paved the way for the assessment of other properties of the scales.

Relatedly, the assessment of dimensionality also afforded the current study to evaluate the possibility of common method biases. Specifically, the Harman's one-factor approach was used to assess common method biases. Many factors explaining less than 50 per cent of variance each suggested that the common method bias was not a serious problem in the present study (Podsakoff *et al*., 2003). Even though Spector (2006) suggest that common method bias is not serious enough to invalidate the results, this assessment was necessary to provide confidence that the results would not be seriously confounded by common method biases.

Because of the multivariate analysis strategy adopted in this study, and specifically the structural equation modelling (SEM), a combination of skewness, kurtosis and Kolmogorov-Smirnov (K-S) tests were used to examine the extent to which the main variables deviated from normal distribution. Overall, the results suggested that the distribution of variables did not deviate problematically from normal distribution. This finding was vital because it permitted the computation of figures based on a number of multivariate techniques.

The reliability of variables, in terms of both Cronbach's alpha and composite reliability, ranged from 0.74 to 0.93, and were therefore acceptable because they exceeded Nunally's cut-off point of 0.70.

Confirmatory factor analysis (CFA) was used to assess the convergent and discriminant validities of the variables of the study. After removing items that loaded weakly, the remaining factors loaded significantly on their specified factors, somewhat suggesting that the convergent validity of the variables was achieved (Anderson & Gerbing, 1988). An approach recommended by Fornell and Lacker (1981) was further used to evaluate the discriminant validity of study variables. Overall, the discriminant validity was confirmed because the average variance extracted (AVE) for each variable was greater than the shared variance (SV) between variables, and in absolute terms, most AVEs were greater than 0.50 as expected (Hair *et al*., 2010; Farrell & Rudd, 2009).

Overall, the properties of scales used to measure variables were found adequate and appropriate to be applied in multivariate analyses.

While the correlation analysis provided initial evidence that the relationships between the main variables were all significant and in expected directions, the study mainly used SEM to test the hypothesised relationships. Compared to other multivariate techniques that can examine only a single relationship at the time, the superiority of SEM lies in its ability to simultaneously test relationships between many variables in a hypothesised model, and equally important, to assess the degree to which the model is consistent with data (Hair *et al*., 2010; Hoe, 2008;; Zhang & Bartol, 2010).

Overall, the hypothesised model (slightly modified) fitted data adequately and better than alternative models. In addition, all the structural paths were significant and in their expected directions.

Research questions and supplementary analyses were provided to evaluate some fine-grained details relating to the present study.

Based on Steiger's Z-test, the study found that while various social factors, including leadership, organisational justice, OCB and affective commitment had larger correlations with innovation; they had relatively lower correlations with creativity.

The other intriguing question was with respect to the types and nature of OCBs that may facilitate IWBs. While preliminary, the systematic analyses of open-ended questions provided evidence that striking a balance between OCBs directed at others (OCB-I) and OCBs directed at the organisation (OCB-O) had fairly good chances of improving IWBs, or at least put conservatively, not to reduce them.

The summary of hypotheses and research questions and whether or not they were supported is provided in Table 4.12.

Table 4.12: Summary of hypotheses and the extent to which they were supported

Reference	Description	Status
Hypothesis 1	There is a positive relationship between OCB and IWB	Supported
Hypothesis 2	There is positive relationship between organisational commitment and OCB	Supported
Hypothesis 3	OCB mediates the relationship between organisational commitment and IWB	Supported

Hypothesis 4	There is a positive relationship between leadership and organisational commitment.	Supported
Hypothesis 5	There is a positive relationship between organisational justice and organisational commitment.	Supported
Hypothesis 6	Organisational commitment mediates the relationship between (a) leadership and (b) organisational justice and OCB	Supported
Hypothesis 7	There is a direct positive relationship between leadership and OCB	Not supported
Hypothesis 8	There is a direct positive relationship between organisational justice and OCB.	Not supported
Hypothesis 9	Organisational commitment and OCB successively mediate the positive relationship between a) leadership and IWB and b) justice and IWB	Partially supported
Exploratory research question 1	Is the relationship between leadership and innovation stronger than the relationship between leadership and creativity?	Supported
Exploratory research question 2	Is the relationship between justice and innovation stronger than the relationship between justice and creativity?	Supported

CHAPTER 5

DISCUSSION AND CONCLUSIONS

5.1. Introduction

The previous chapter presented data analyses and the results in relation to the study problem, objectives and hypotheses. The focus of the present chapter is to discuss the results of the entire study in the context of the reviewed literature.

The overall aim and objectives of this study have been expressed and detailed in nine research hypotheses and two exploratory research questions. The final hypothesis brings together all other hypotheses, and so to speak, constitutes the overall contribution of the study. However, since each hypothesis and research question has a unique contribution to make to the overall proposition of this thesis, the discussion focuses on each hypothesis.

The next section after this introduction provides the summary of the results, followed by the detailed discussion of the results in relation to each hypothesis. The limitations of the study; its implications; and future research directions will respectively follow the discussion of results. The final section will be the conclusion of the thesis.

5.2. Summary of the results

This study set out with the overall aim of proposing and examining the model that links leadership and organizational justice to IWB through the successive mediating roles of organisational commitment and OCB. Even though the direct effects of leadership and organisational justice on IWB have been found difficult to ascertain in earlier studies (Anderson *et al*., 2014; Zhou & Hoever, 2014), to the best knowledge of the author of this thesis, a 2-step mediated model involving

organisational commitment and OCB in series between the focal constructs has not been specified and examined.

Overall, the findings of this study support the model in which the effects of both leadership and organisational justice on IWB were successively mediated by organisational commitment and OCB.

The first specific objective of the study was to examine the relationships between two prominent extra-role behaviours – OCB and IWB. Despite having close conceptual origins, little empirical evidence exists on the nature of the relationship between these criterion variables (Turnipseed & Turnipseed, 2013; Xerri & Brunneto, 2013).

The results of this study support the proposition that OCB and IWB are distinct, but related constructs.

The second objective was to evaluate the relationship between organisational commitment and OCB, while controlling for the relationship between organisational justice and OCB. To the knowledge of the author of this study, it is yet to be resolved as to which of the three explanatory models – the direct effects model (Organ & Ryan, 1995); the mediated model (Lavelle *et al*., 2009); and the spurious model (Moorman *et al*., 1993) – fits data well, and why (Fassina *et al*., 2008*a*).

The results show that the mediated model fitted data better than alternative models.

The third objective was to examine if different factors differentially predict the components of IWB – creativity and innovation (Binnewies & Gromer, 2012). In spite of being conceptually distinct, researchers have tended to subsume creativity and innovation into one overall IWB concept (Anderson *et al*., 2014).

The results also indicate that various predictors correlated stronger with innovation, while correlating relatively weaker with creativity.

Finally, while preliminary, this study provides evidence that striking a balance between OCB types may facilitate employee engagement in IWBs.

The next section provides a more detailed discussion of these results.

5.3. Discussion of the findings

What is the nature of the relationship between OCB and IWB?

The first directional hypothesis predicted that there would be a positive relationship between OCB and IWB.

The results strongly support this relationship. In the primary study, the correlation coefficient between the two constructs was 0.42 ($p \leq 0.01$), and the standardised regression coefficient was 0.36 ($p \leq 0.01$). The correlations have also been consistent in three separate samples of pilot studies, being recorded as 0.38 ($p \leq 0.01$) in pilot study sample 1; 0.31 ($p \leq 0.05$) in pilot study sample 2; and 0.35 ($p \leq 0.01$) in pilot study sample 3. The relationships remained statistically significant even after partialling out the effects of the social desirability variable.

This finding is important because it responds directly to previous calls to examine the nature of the relationship between OCB and IWB (Turnipseed & Turnipseed, 2013; Xerri & Brunetto, 2013).

There might be a concern that the two constructs are the dimensions of a general extra-role citizenship behaviour construct, and so to paraphrase LePine *et al*. (2002), they may be thought of as imperfect indicators of the same underlying construct such as 'being cooperative and helpful at work'. In this case, the dimensions would be highly correlated, and no mileage would theoretically be gained by separating them.

This thesis provides at least four reasons that support the separation of these two constructs. First, this study provides evidence that there was convergent validity (convergence between items of the same construct) and discriminant validity (differences between dissimilar constructs) between OCB and IWB (Hair *et al*., 2010; Naqshbandi *et al*., 2016). Furthermore, an attempt to specify a single factor in which all items of the two constructs could load resulted in a relatively poorer model fit.

Second, the two focal constructs were predicted by different factors. For instance, while organisational commitment had consistent relationships with OCB in the primary and pilot studies; it did not relate to IWB in all the samples of this study. Conversely, while management level was positively associated with IWB, it did not relate significantly to OCB.

The first and second points provide enough empirical evidence to support the separation of any two constructs (Shane & Venkataraman, 2000). But there are two additional grounds that support the separation of OCB and IWB in this thesis.

Third, the two constructs are probably formative dimensions of a broader work performance construct (MacKenzie *et al*., 2011*b*). Thus this study supports the proposition made by Harari *et al*. (2016) that in addition to task performance, OCB, counterproductive work behaviours (CWB), adaptive behaviour, and knowledge transfer; creative and innovative performance (IWB in this study) is emerging as a distinct dimension of work performance.

Fourth, several authors (Bettencourt, 2004; Choi, 2007; Chiaburu *et al*., 2013; Chiaburu *et al*., 2011; MacKenzie *et al*., 2011*a*) provide a theoretically sound basis for separating affiliation-oriented OCBs (e.g.

OCB in this study) and change-oriented OCBs (e.g. IWB in this study). This study supports this categorisation because exploratory and confirmatory factor analyses have provided evidence that these two constructs are distinct.

Bringing all the above points together, LePine *et al.* (2002: 55) notes 'that if the behavioural dimensions covary only moderately and if there are clear differences between dimensions with respect to relationships in the broader nomological network, then it may be appropriate to draw inferences about the behavioural dimensions as if they were separate constructs'. The findings of this study with respect to OCB and IWB are in line with LePine *et al*.'s view.

In summary, the present study provides evidence that OCB and IWB are related, but distinct constructs.

The association between constructs is one thing, and their causal or temporal ordering is another. While this thesis cannot provide definitive evidence of causality between the variables because of its cross-sectional nature, the theoretical foundations can be employed to justify that OCB undergirds IWB.

To begin with, several authors have pointed out that IWB is risky (Anderson *et al*., 2014; Agarwal, 2013; Janssen, 2000, 2004; Mumford *et al*., 2002), and therefore, it would not be surprising for a typical employee to expect some support before they engage in it. Owing to its supportive and non-controversial nature, OCB can 'lubricate the social machinery of the organisation', and hence can reduce the friction and uncertainty associated with IWB (Naqshabandi *et al*., 2016: 202). This was one of the central propositions put forward in this study, and the hypothesised model that fitted data reasonably well generally supported it. Previous empirical studies, while not all

providing a clear theoretical support, have indicated that OCB is a precursor of IWB (Harari *et al*., 2016; Xerri & Brunneto, 2013).

In aggregate, this study not only provides evidence that OCB and IWB are related but distinct, but also more importantly, clarifies that OCB may be a predictor of IWB in a broader nomological network of extra-role citizenship behaviours. Thus the findings of the study respond to earlier calls for more research that evaluates the nature of the relationships between OCB and IWB (Turnipseed & Turnipseed, 2013). In a broader nomological network of individual work performance, the study also responds to the oft-repeated calls for synthesising across types of performance criteria (Carpini & Parker, 2017).

What is the nature of the relationship between organisational commitment and OCB?

The second directional hypothesis predicted that there would be a positive relationship between organisational commitment and OCB.

As expected, there was a consistent support for this hypothesis in both the primary and pilot studies. This is in line with both the theories of Social Exchange (Katz & Kahn, 1978) and Social Identification (Ashforth & Mael, 1989). Since affective commitment can be viewed as an attitudinal indicator of high quality social exchange between an employee and the organisation, committed employees can be expected to engage in OCB as a means of reciprocating the support they get from their organisations (Cropanzano & Mitchell, 2005; Lavelle *et al*., 2009). Along similar lines, since committed employees are likely to identify with their organisations, they can readily engage in extra-role behaviours (OCBs) to advance the interests of their organisations because they have formed their identities around their organisations (Blader & Tyler, 2009). In line with both theories, several empirical

studies have provided support for hypothesis two (Coyle-Shapiro *et al*., 2004; Hoffman *et al*., 2007; Lehmann-Willenbrock *et al*., 2013; Organ & Ryan, 1995; Podsakoff *et al*., 2000).

Note however that, considered alone, one may argue that the support for hypothesis two does not make substantial contribution to literature because it replicates earlier studies. Granted, but as indicated in earlier sections of this study, many prior studies have not examined this relationship while controlling for the effects of organisational justice on OCB. As was the case in this study, where the relationship between organisational commitment (and its close relation, job satisfaction) and OCB have been examined in the model that includes organisational justice, the support for this relationship has not passed without challenge (Moorman *et al*., 1993). Thus the contribution of support for hypothesis two becomes more evident when considered along with the findings related to hypothesis six below.

Does OCB mediate the positive relationship between organisational commitment and IWB?

The third hypothesis predicted that OCB would mediate the positive relationship between organisational commitment and IWB. In spite of many plausible expectations advanced by several theoretical frameworks such the Social Exchange (Katz, 1964) and Social Identification (Ashforth & Mael, 1989) theories, the direct effects of organisational commitment on creativity and innovation have not been consistent (Jaros, 2010). For instance, in both the primary and pilot studies of this thesis, organisational commitment did not associate significantly with IWB. As indicated by Marinova *et al*. (2015), it may be that committed employees find it difficult to challenge their organisations. Alternatively, as Mumford *et al*. (2002: 712) suggest, 'by the virtue of their autonomy and professional focus', creative

people have intrinsic motivation, and as such, managers cannot motivate them to be creative. In cases like this, employees may instead want material and psychological support to engage in IWBs.

The present study put forward and found support for the mediating role of OCB between organisational commitment and IWB. This finding was supported by the overall model fit statistics, and the results of both Sobel tests and bootstrapping technique. While this finding is not in line with any known prior empirical findings the author of this study is aware of, several theoretical arguments support it.

As indicated in earlier sections of this study, IWB is risky because it requires employees to sometimes violate habitual norms (Argawal, 2013, 2014; Gao *et al*., 2011); so employees, especially committed ones; may arguably need some sort of support from management and colleagues before they engage in it. When employees engage in OCBs, according to the Social Information Processing Theory (Salancik & Pfeffer, 1978), they give cues to others to reciprocate by adopting similar behaviours (Chen *et al*., 2013). This symbiotic relationship may create an environment that maintains and enhances the social and psychological context in which innovative activities take place (Organ, 1997). Along similar lines, positing that OCBs reduce friction and uncertainty by 'lubricating the social machinery of the organisation', Naqshbandi *et al*. (2016: 202) found that OCBs were positively related to in-bound and out-bound innovations in organisations. Along related lines, the study by Bettencourt (2004) did not find the direct positive relationship between organisational commitment and change-oriented OCB, but instead found that the positive relationship between the two constructs is moderated by employee learning goal-orientation.

The present study contributes to literature because it shows that in the absence of affiliation-oriented OCBs, employees may not necessarily

engage in change-oriented OCBs such as IWBs. This finding is particularly informative because it gives a different perspective from the one propounded by Bettencourt (2004) of how committed employees may engage in IWBs. While Bettencourt (2004) found that the positive relationship between organisational commitment and change-oriented OCB was moderated by the learning goal-orientation, the current study presents evidence that the positive relationship between organisational commitment and IWB was mediated by OCB. In other words, while Bettencourt's (2004) study suggested the boundary conditions within which organisational commitment can influence the change-oriented OCB (moderation), the present study provides explanation of how organisational commitment can influence the change-oriented OCB (mediation). Thus the two studies are complementary, and while different, they equally contribute to existing literature.

In summary, the study presented here provides some strong evidence that the association between organisational commitment and IWB is not direct, but rather, that it is fully mediated by OCB.

What is the nature of the relationship between leadership and organisational commitment?

The fourth directional hypothesis predicted that leadership would be positively related to organisational commitment. The results support this hypothesis, but only at 95% confidence level. Based on theoretical frameworks, this study had however expected the stronger relationship.

Social Exchange Theory (SET) predicts that employees who perceive quality leadership from the agents of the organisation (managers) should reciprocate by being affectively committed to their

organisations. Similarly, the JD-R theory posits that the presence of a psychological resource such as supportive or considerate leadership would induce employee affective commitment.

In general, this study expected that leaders would strongly influence their followers' emotions and affective commitment.

In support of the above theories, the work by Steyrer *et al*. (2008) and Strauss *et al*. (2009) have found the positive relationship between leadership and organisational commitment. On the contrary, while statistically significant, the relationship between leadership and organisational commitment in the present study was subdued. However, the subdued relationship between leadership and organisational commitment is nothing new. For instance, Podsakoff *et al*. (1996) found out that out of six leadership behaviours, only one (articulating a vision) had significant main effects on organisational commitment. Similarly, Bettencourt (2004) did not find a significant direct path from core transformational leadership to organisational commitment, but instead found that the core transformational leadership construct only had an indirect positive relationship with organisational commitment through the leader-member-exchange quality.

While not hypothesised in the present study, it is possible that the positive relationship between leadership and organisational commitment could be partially or fully mediated by other factors. For instance, the zero-order correlations between leadership and organisational commitment were consistently high in the primary and pilot samples of this study, but once the relationship between organisational justice and organisational commitment was controlled for in the main study, the relationship between leadership and organisational commitment became subdued, while the relationship

between organisational justice and organisational commitment remained relatively high.

Pertaining to the present case, it may be that the positive relationship between leadership and organisational commitment was partially mediated by organisational justice. As agents of the organisation, it is possible that leaders may create just work contexts, and in reciprocation to this fairness, employees may be committed to their organisations (Lehmann-Willenbrock *et al*., 2013; Niehoff & Moorman, 1993). The recent study by Khaola and Coldwell (2017*c*) found that the positive relationship between leadership and affective commitment was partially mediated by organisational justice.

In aggregate, this thesis provides evidence that some variance in organisational commitment was explained by leadership as expected.

What is the nature of the relationship between organisational justice and organisational commitment?

The fifth directional hypothesis predicted that organisational justice would be positively related to organisational commitment. The effect sizes between these two variables remained consistently high in the primary and pilot samples of this thesis. This is not surprising given that the common denominator between the two attitudes is the phenomenon Organ and colleagues (2006) call an 'm'-factor (i.e. **m**orale reflecting affective commitment; fairness; job satisfaction and leader consideration). Furthermore, according to SET, treating employees fairly would prompt them to reciprocate by being committed to their organisations (Podsakoff *et al*., 2000). SET is further supported by the Group-Value Model of justice which posits that treating employees fairly could signal to them that they are valued members of the organisation (group), and as a result, they

could respond by being committed to their organisations, and vice-versa (Lavelle *et al*., 2009).

From the empirical standpoint, in line with the above views, several authors have found that organisational justice has been one of the most effective predictors of organisational commitment (Fassina *et al*., 2008a; Lavelle *et al.,* 2009; Lehmann-Willenbrock *et al*., 2013).

One may argue that obtaining empirical evidence for hypothesis five is not, in itself, ground-breaking because there is nothing new in the positive relationship between organisational justice and organisational commitment. In general, as was indicated with regard to hypothesis two, the support for hypotheses four and five may not, at the glance, seem to make substantial contribution to literature because they replicate earlier studies, even if, admittedly, they do so in a different context.

The contribution with regard to the support for the above hypotheses becomes evident when this thesis presents evidence for the presumed nomological validity between organisational justice, organisational commitment, and OCB as suggested in the form of support to hypothesis six. Remember that Moorman *et al*. (1993) have posited that the relationship between attitudes such as job satisfaction and organisational commitment and OCB may reflect large components of fairness, and in their view, this creates the spurious relationship that makes the consistent relationships between these attitudes and OCBs somewhat dubious. The support for hypothesis six provides an alternative explanation to Moorman *et al*.'s (1993) thesis.

Does organisational commitment mediate the positive relationship between OCB and a) leadership and b) organisational justice?

The sixth hypothesis predicted that organisational commitment would mediate the positive relationship between OCB and a) leadership, and b) organisational justice. This study provides support for this hypothesis. This is because the hypothesised mediated model fitted data better than alternative models, and the indirect effects, as indicated by the Sobel tests and the bootstrapping technique, were all significant.

The debate in the literature has previously centred on, to wit, three main models (Fassina *et al*., 2008*a*).

The *spurious model* argues that the relationship between organisational commitment and OCB may reflect large components of fairness because fairness relates to both commitment and OCB. In fact, Moorman *et al*. (1993) suggest that there is no relationship between organisational commitment and OCB once the relationship between organisational justice and OCB is controlled for. In this case, unless the relationship between organisational commitment and OCB is established after controlling for organisational justice, Moorman *et al.* (1993) could argue that hypothesis two could well be spurious.

The *direct effects* model argues that organisational commitment and organisational justice have direct effects on OCB; and none mediates the other (Organ & Ryan, 1995). In two meta-analytic studies separated by a period of more than 10 years, Organ and Ryan (1995) and Fassina *et al*. (2008*a*) found support for the direct effects model. In this case again, because of the common denominator underlying many attitudes in the form of what Organ and colleagues (2006) call an 'm'-factor (i.e. **m**orale reflecting affective commitment; fairness; job satisfaction and leader consideration), the separate relationships between organisational commitment and OCB (hypothesis 2); leadership and organisational commitment (hypothesis 4); and

organisational justice and organisational commitment (hypothesis 5) would not provide a clear picture of the temporal ordering of these constructs.

The present thesis proposed, and found support for the mediated model which posits that the effects of both leadership and organisational justice on OCB are mediated by affective commitment. Several theories and studies give support to this finding.

Conceptually, situational factors such as leadership and organisational justice are distal antecedents of behaviour, while attitudes such as organisational commitment and job satisfaction are proximal determinants of behaviour (Zhou & Hoever, 2014). It is therefore not surprising that leadership and organisational justice influenced affective commitment, and in turn, affective commitment influenced OCB. In other words, according to Attitude-Behaviour Framework, context may shape people's attitudes, which in turn should affect people's behaviour.

In further support of the mediated model, SET locates organisational commitment as an indicator of the quality of social exchange (Colquitt *et al*., 2013; Cropanzano & Mitchell, 2005; Lavelle *et al*., 2009). In this regard, affective commitment marks employees' readiness to reciprocate fair treatment (justice) and support (leadership) through, among other behaviours, OCBs. This resonates with Blau's (1964) suggestion that the establishment and maintenance of social exchange relationship require long-term commitment (Colquitt *et al*., 2013: 202). In other words, organisational justice and leadership are expected to influence affective commitment, which in turn is expected to influence OCB. Thus the support for hypothesis six is generally in line with the tenets of SET.

Social Identification Theory (SIT) can also be used to explain the current results.

In general, many people like to identify with fair entities, and according to Lavelle *et al*. (2009), when organisations and managers become fair, they induce employees to identify with them, and this identification has positive implications for OCB. Put differently, leadership and fairness trigger organisational commitment (identification), which in turn triggers OCB.

In addition to the above theoretical arguments, several empirical studies have found that organisational commitment mediates the positive relationships between both organisational justice and OCB (Colquitt *et al*., 2013; Fassina *et al*., 2008b; Lavelle *et al*., 2009; Lehmann-Willenbrock *et al*., 2013), and leadership and OCB (Podsakoff *et al*., 1990).

Wang *et al*. (2011) earlier made a call to researchers to examine the mediating factors between leadership and wide performance criteria, including OCB. This thesis responds to that call, and specifically contributes to literature by identifying affective commitment as one such explanatory factor.

In spite of the strong support for hypothesis six, future studies can benefit further by taking note of Zhou and Hoever's (2014) and Shalley *et al*.'s (2004) recommendations and examine the interactionist perspective which posits that contextual factors interact with attitudes to influence behaviour.

Why could this study support the mediated model, while some earlier studies supported either the spurious model (Moorman *et al*., 1993; Williams & Anderson, 1991), or the direct effects model (Fassina *et al*.,

2008*a*; Organ & Ryan, 1995)? Two main reasons can be advanced to explain these differences.

First, in line with the arguments made by Fassina *et al*. (2008*a*), there is no evidence that organisational justice consists of any major components of affective commitment, and by implication, this rules out any possibility of the spurious relationship suggested by Moorman *et al*. (1993). As indicated earlier, the two concepts are distinguishable, not only based on how they are measured, but also on the extent to which they are morally-laden (Fassina *et al*., 2008*a*).

Second, this study measured the affective elements of commitment (affective commitment), and left out calculative elements. As indicated previously, some researchers have argued that while job satisfaction and organisational commitment capture both cognitive and affective components of an attitude, organisational justice represents a cognitive or conscious calculation of the environment, and hence the three have a lot in common (Organ, 1990; Moorman *et al*., 1993; Williams & Anderson, 1991). Thus this study is different because it only measured the affective elements of commitment, and not calculative ones. This is likely to significantly differentiate the measure of organisational commitment used in this study and the calculative elements inherent in organisational justice.

While this thesis is in accord with Fassina *et al'*s (2008a) arguments that organisational justice is distinct from job satisfaction, it differs from their conclusion because it does not support the direct effects model. Rather, the present thesis supports a mediated model because, among other reasons, it is in line with established theories. For instance, both organisational justice and leadership are social contextual variables (Anderson et al., 2014; Zhou & Hoever, 2014), and as a result, according to context-attitude-behaviour theorem, both

concepts should influence commitment (attitude), which in turn should influence OCB (behaviour).

In summary, this thesis provides evidence that affective commitment mediates the positive relationship between OCB and both leadership and organisational justice. It does not support the claim that the relationship between these variables is either spurious, nor that all of organisational commitment, leadership and organisational justice have direct effects on OCB.

The support for hypothesis six is reinforced by lack of support for hypotheses seven and eight as discussed next.

Do leadership and OCB have a direct association?

The seventh directional hypothesis tentatively predicted that there would be some positive relationship between leadership and OCB. Though this study does not support this relationship, it has a strong theoretical backing.

Based on SET (Katz, 1964), and specifically based on the norm of reciprocity theorem (Gouldner, 1960), employees are expected to reciprocate good leadership by engaging in OCB. Similarly, JD-R Theory posits that employees may perceive good leadership as a job resource that facilitates their engagement in OCB (Agarwal, 2014). More specifically, transformational leaders may influence followers to perform beyond expected levels because they inspire them to internalise goals, and further challenge them to perform beyond the call of duty (Wang *et al*., 2011).

Several authors have found the consistent support for the positive relationship between leadership and OCB (McKenzie *et al*., 2001; Organ & Ryan, 1995; Podsakoff *et al*., 2000; Wang *et al*., 2011).

Notwithstanding the above conceptual and empirical support for the relationship between leadership and OCB, Wang *et al*. (2011) have aptly called for the examination of the mediating factors between leadership and different performance criteria. In support of this call, Park *et al*. (2013) could not find a direct path between leadership and OCB, but rather found that the positive relationship between the two focal constructs was mediated by psychological ownership. Earlier, Purvanova *et al*. (2006) found that the effects of leadership on citizenship behaviour were mediated by job characteristics. In the same vein, Piccolo and Colquitt (2006) found that the effects of transformational leadership on task performance and OCB were partly explained by job characteristics, intrinsic motivation, and goal commitment.

The present study did not find evidence to support the direct relationship between leadership and OCB once affective commitment was included in the model either. While the reasons for this are not obvious, it may be that where effective mediators exist, there is no direct relationship between leadership and OCB.

Lack of support for hypothesis seven reinforces the earlier finding indicating that affective commitment is the effective mediating variable between leadership and OCB, and to some extent, compliments earlier empirical studies along the same lines.

In general, the present study compliments studies that suggest that for leadership to influence employee OCBs; employee emotions; say in the form of psychological ownership (affective state in which individuals feel as though the target of ownership is theirs; Park *et al*., 2013); affective commitment (emotional attachment to the target of interest; Khaola & Coldwell, 2017*a*); or meaningful work (job

characteristics; Piccolo & Colquitt, 2006; Purvanova *et al*., 2006); have to be aroused first.

In summary, lack of support for hypothesis seven provides evidence that the positive relationship between leadership and OCB may not be direct, but is rather mediated by affective commitment as propounded previously.

Do organisational justice and OCB have a direct association?

The eighth directional hypothesis predicted that there would be a positive relationship between organisational justice and OCB. This relationship does not only have a strong theoretical backing, but is also one of the most rigorously researched hypotheses in the OCB literature (Colquitt *et al*., 2013; Lavelle *et al*., 2009). In fact, researchers have sometimes relied on organisational justice as a proxy for social exchange (Schroeder, 2010).

According to the Fairness Heuristic Theory, employee reactions are heavily influenced by fairness judgments, especially when it relates to trusting authority figures in future and uncertain environments (Carmeli *et al*., 2006; Khazanki & Masterson, 2011). In other words, fair treatment can cause employees to redefine their employment in terms of social exchange, with OCB as a common exchangeable or reciprocative behaviour (Colquitt *et al*., 2013). To emphasise the essential role played by justice in the context of social exchange, Colquitt *et al*. (2013: 201) have noted that 'justice reflects the sort of symbolic resource that should foster reciprocative action in the part of employees'.

With few exceptions, several studies have provided concrete evidence that organisational justice has emerged as a consistent predictor of OCB (Colquitt *et al*., 2013; Fassina *et al*., 2008a; 2008b; Lavelle *et al*.,

2009; Moorman *et al*., 1993; Organ & Ryan, 1995; Podsakoff *et al*., 2008; Spitzmuller *et al*., 2008).

In spite of the seemingly intimate relationship between organisational justice and OCB, at least based on SET, the present study did not find evidence to support the direct relationship between organisational justice and OCB, particularly once the relationship between affective commitment and OCB was controlled for. Thus lack of support for hypothesis 8 provides another indirect support to an earlier argument that organisational commitment mediates the positive relationship between organisational justice and OCB (hypothesis 6). In other words, affective commitment explains the positive relationship between organisational justice and OCB – i.e. organisational justice leads to OCB by deepening affective commitment to organisations (Colquitt *et al*., 2013).

Why would this study support the mediated model in which organisational commitment mediates the positive relationship between organisational justice and OCB (hypothesis 6); and not the direct effects model in which organisational commitment and justice have direct relationships with OCB (hypotheses 8)? This is an interesting question, particularly because organisational justice has been construed as a proxy for social exchange, and the relationship between organisational justice and OCB has before precisely and largely been viewed through the lens of social exchange. Three speculative reasons can however be advanced to explain the above relationships (or lack thereof).

First, the present study focused on affective commitment, and as indicated in previous sections, an affective dimension of commitment (as opposed to calculative dimension) is an indicator of social exchange (Colquitt *et al*., 2013; Cropanzano & Mitchell, 2005; Lavelle

et al., 2009). As suggested earlier by Organ (1990), as a psychological attachment to the organisation, organisational commitment should causally and temporally occur before OCB.

Second, even though justice is sometimes used as a proxy for social exchange (Schroeder, 2010), long-term commitment is required to establish and maintain social exchange relationships (Colquitt *et al*., 2013).

Third and perhaps most importantly in this regard, even though SET explains how justice perceptions impact on OCB; this explanation has always been made based on cognitive or reasoned appraisals; and not based on affect (Colquitt *et al*., 2013). This traditional approach ignores the fact that an employee is simultaneously an emotional and rational being. Thus according to Colquitt *et al*. (2013), affect (state of feeling) provides complimentary explanation to SET predictions.

In line with affective approach, justice can foster positive feelings, and injustice can trigger negative feelings, both of which can respectively increase or reduce OCB. In this scenario, affect would mediate the relationship between justice and OCB. It may be that affective commitment as measured in this study, not only captured the elements of affect, but also played an effective mediating role between organisational justice and OCB. Along these lines, Colquitt *et al*. (2013) have found that both positive and negative affect mediated the relationship between organisational justice and OCB.

In summary, lack of support for hypothesis eight provides evidence that the positive relationship between organisational justice and OCB may not be direct, but rather, may be mediated by affective commitment as hypothesised.

Do both leadership and organisational justice link to IWB through the mechanisms of organisational commitment and OCB in series?

Hypothesis nine predicted that affective commitment and OCB would successively mediate the positive relationship between IWB and a) leadership, and b) organisational justice. In general, integrating literatures across leadership, justice, commitment, OCB, creativity, and innovation domains, hypothesis nine locates organisational commitment and OCB as successive mediating (explanatory) variables between IWB and both leadership and organisational justice. This was the final hypothesis, and perhaps the one that marks the primary proposition tested in this thesis.

The key question therefore was: Do leadership behaviours and fairness influence employee IWBs by deepening commitment and facilitating OCBs?

The extant literature generally indicates that the impact of leadership and organisational justice on IWB is equivocal (Anderson *et al*., 2014; Khazanchi & Masterson, 2011; Zhou & Hoever, 2014). As a result of this equivocality of results, several authors have proposed and confirmed many moderating and intervening variables between the predictors and criteria in this regard (e.g. Bettencourt, 2004; Liu *et al*., 2016; Pieterse *et al*., 2009; Qu *et al*., 2015; Simmons, 2011; Zhang & Bartol, 2010). While these earlier studies have provided useful insights into the mechanisms through which leadership and justice relate to IWB, to the best knowledge of the author of this thesis, these literatures have to date not been integrated. Furthermore, with the exception of few studies (e.g. Zhang & Bartol, 2010 and Agarwal, 2013), earlier studies have not included more than one mediating variable between either leadership or organisational justice and IWB.

The present study proposed and tested the model that links leadership and organizational justice to IWB through the serial mediating roles of organisational commitment and OCB. Again, to the best knowledge of the author of this thesis, this 2-step mediated model between the constructs of interest is yet to be examined.

The results show that the modified 2-step mediated model in which the relationship between organisational justice and IWB was fully mediated by affective commitment and OCB in series; and the relationship between leadership and IWB was partially mediated by affective commitment and OCB in series; fitted data better than alternative models. In addition to the overall model fit indicators, the results from the bootstrapping technique confirm that the indirect effects on IWB of both leadership and organisational justice, through affective commitment and OCB in series, were significant as expected.

The model tested here is supported by several frameworks, and while it complements some earlier studies, it is unique in that it suggests in a single study two untested explanatory mechanisms through which both leadership and justice can link to IWB.

Leadership and organisational justice are socially-embedded situational factors, and as argued in earlier sections of the study, according to SET, they positively relate to OCB through the medium of affective commitment (indicator of social exchange) (Lavelle et al., 2009). This study extends this relationship to include IWB as an ultimate behaviour in the nomological network of constructs examined presently, and specifically argues that OCB is a precursor of IWB.

From the theoretical standpoint, in line with the findings of this study, several factors support that OCB temporally and causally occur before IWB.

First, OCB supports the social and psychological environment in which task and technical activities take place (Borman & Motowidlo, 1993; Organ, 1997). One of the activities that need to be supported by OCB in organisations is IWB because, even though it has some features of OCB (Janssen, 2000; 2004), it has some elements that are in-role in nature (De Spiegelaere, 2014; Tuominen & Toivonen, 2011).

Second, IWB is risky because innovative employees often challenge existing routines and colleagues (Agarwal, 2013; Chiaburu *et al*., 2013; Janssen, 2004), and arguably they (innovative employees) need some material and psychological support before they engage in it. Because of its affiliation-oriented nature, OCB 'lubricates the social machinery of the organisation' (Naqshbandi et al., 2016: 202), and it is therefore not surprising that it could facilitate IWB as hypothesised. More specifically, it may be that OCB creates social capital (co-worker relationships), which in turn fosters divergent thinking and creativity (Chen *et al*., 2013). It may also be that social capital created by OCB facilitates perspective-taking, risk-taking and intrinsic motivation, all of which undergird IWB (Shalley et al., 2004). Perry-Smith and Mannuci (2017) recently posited that intrinsic motivation which undergirds IWB flourishes in contexts characterised by security and relatedness, and arguably, OCB provides such context.

From the empirical standpoint, several studies provide evidence that OCB undergirds IWB (Harari *et al*., 2016; Naqshbandi *et al*., 2016; Xerri & Brunneto, 2013; MacKenzie *et al*., 2011*a*).

The present study builds on, and extends the works of Zhang and Bartol (2010), and Agarwal (2014).

Even though this study is different from the study by Zhang and Bartol (2010), both studies to a certain degree complement each other. While

the present study found that leadership links to IWB through affective commitment and OCB in series, Zhang and Bartol (2010) found that empowering leadership links to creativity through psychological empowerment, intrinsic motivation and creative process engagement. In other words, both studies suggest that leadership may not have a direct relationship with IWB, but that such relationship may instead be mediated by other factors.

With respect to the effects of justice on IWBs, the present study builds on the work of Agarwal (2014). While the present study found that organisational justice links to IWBs through affective commitment and OCB in series, Agarwal (2014) found that psychological contract, procedural justice and interactional justice link to IWBs indirectly through trust and work engagement in series.

The present study builds on, and extends the works of Zhang and Bartol (2010) and Agarwal (2014) because it suggests how both leadership and organisational justice (independent variables) indirectly link to IWB (dependent variable) through a 2-step mediated model involving affective commitment (first mediator) and OCB (second mediator) in a single study. This sequential relationship is also in line with the leadership – creativity model which suggests that leader attributes and behaviours (leadership behaviour in this study) affect follower creativity (IWB in this study) via the evolving system of follower internal states (affective commitment in this study) and activities (OCB in this study) (Huang *et al*., 2016). This integration is essential for advancing knowledge in related research domains.

Thus in different but complementary ways, the above three studies contribute to literature because they not only show that the relationships between either leadership or fairness and IWB are more

complex than originally thought, but also that a variety of ways can be used to explain these relationships.

The study presented here responds to calls made earlier to researchers to examine different mediators between leadership and a wide performance criteria (Wang et al., 2011); leadership and IWB (Mumford *et al*., 2002; Zhou & Hoever, 2014); and justice and IWB (Anderson *et al*., 2014; Zhou & Hoever, 2014).

In summary, this thesis proposed and found evidence for a model in which affective commitment and OCB successively mediate the positive relationships between both leadership and organisational justice (independent variables) and IWB (criterion variable). Drawing primarily on Social Exchange Theory (SET), Job Demand-Resources Theory (JD-R theory), Social Identification Theory (SIT), and Cognitive Evaluation Theory (CET), this study integrates literatures from various research domains, including leadership, organisational justice, organisational commitment, OCB, creativity and innovation to support the proposed model.

This study's unique contribution relates to how it locates the effective roles of two new mediating variables (affective commitment and OCB) between IWB and two social contextual variables (leadership and organisational justice) that have not been modelled together before. The secondary, but by all means no less profound contribution, relates to the study's explication of the nature of relationships between OCB and IWB, the two performance domains whose relations are yet to be rigorously synthesised (Xerri & Brunneto, 2013).

Do leadership and organisational justice have higher correlations with innovation, while having relatively lower correlations with creativity?

Exploratory research questions one and two inquired into whether the correlations between both leadership and organisational justice can respectively be subdued with regard to creativity (idea generation); and be relatively more pronounced with regard to innovation (idea promotion and implementation). These two research questions were arrived at based on at least two related conceptual grounds.

First, several studies posit that the two processes of IWB (creativity and innovation) are related, but distinct constructs (Anderson et al., 2014; Binnewies & Gromer, 2012; Janssen, 2000; Perry-Smith & Mannuci, 2017; Scott & Bruce, 1994, 1998; Zhou & Hoever, 2014). Second, according to Behavioural Plasticity Theory (the extent to which behaviour is influenced by social experiences), in comparison to creativity, innovation is more likely to be influenced by leadership and other socially-embedded behaviours because it is regarded as a social process that relies on the support of other employees (Rank *et al*., 2009:467). In spite of these two known points, earlier studies have tended to subsume creativity (idea generation) and innovation (idea promotion and idea implementation) into one summative scale (e.g. Janssen, 2000; 2004).

The results of the present thesis show that one factor emerged from the explorative factor analysis of IWB items. However, based on at least two grounds, two constructs (creativity and innovation) with acceptable internal consistency levels were formed for further analysis. First, creativity and innovation are formative dimensions of IWB, and unlike in those constructs having reflective dimensions, factor analysis, important as it is, is not often emphasised when dealing with formative factors (MacKenzie *et al*., 2011*b*). This is because in constructs with formative indicators, no theoretical assumption is made about inter-item correlation (Coltman, Divinney, & Midgley, 2008). While a

construct with reflective indicators (e.g. attitude) is the one in which the latent construct exist independent of measures used, a construct with formative indicators (e.g. performance) is determined from the combination of indicators (Coltman *et al*., 2008).

Second, this study presents evidence that predictors related differently with creativity and innovation, suggesting that the two dimensions may well be conceptually distinct (Binnewies & Gromer, 2012).

As expected, the results support that both leadership and organisational justice had more amplified relationships with innovation compared to creativity. While the exploratory research questions were based on the differential relationships between predictor social contextual variables (leadership and organisational justice) with the dimensions of IWB (creativity and innovation), the same trend was observed with regard to OCB (another social factor) and affective commitment (attitude). Two speculative reasons can be advanced to explain these differential relationships.

First, it is possible that these variables have more pronounced correlations with innovation compared to creativity because the former (innovation) involves inter-individual processes, while the latter (creativity) involves intra-individual processes (Anderson *et al*., 2014; Rank *et al*. 2009). Second, it is also possible that creative performance (which hedges on task knowledge, skills and expertise, Amabile & Pillemer, 2012), is more constrained by cognitive ability; while innovation (which is susceptible to social support factors, Rank *et al*., 2009) is less constrained by cognitive ability (Khaola & Coldwell, 2017*b*) and hence cuts across many jobs (Organ, 1997). In this case creativity may be considered similar to task and technical performance than OCB, while innovation may be considered similar to OCB than task performance. This is supported by Harari *et al*'s (2016) study that

found that creative performance shared more consistent relationship with task performance than did innovative performance.

In summary, the present study provides evidence that contextual, cognitive and attitudinal factors may influence creativity and innovation differently.

Does striking a balance between OCB types facilitate IWBs?

While the present study provides useful insights into the relationships between OCB and IWB based on quantitative indicators, it is vital to delve deeper into the nature of this relationship. Recent work has categorised OCB into its components (e.g. OCB-I and OCB-O), but the effects of these types of OCB on goal attainment in general, and IWB in particular is yet to be examined (Khaola & Coldwell, 2017*a*).

Drawing from Entropic Citizenship Behaviour framework (Coldwell & Callaghan, 2014), Conservation of Resources Theory (Hobfoll, 1989, 2002), Attention Capacity and Resource Allocation Theories (Bergeron, 2007; Harrison & Wagner, 2016), this thesis has propounded that striking a balance between OCB types can facilitate engagement in IWBs. This is because when employees spend resources in one activity (e.g. OCB-I); they may deplete resources available for another activity (e.g. OCB-O) (Hobfoll, 2002). For instance, Bergeron *et al*. (2014) found that while the internally-oriented OCBs influenced outcomes negatively, the externally-oriented OCBs influenced them positively.

In general, striking a balance between activities that may compete for resources hold promise for increasing different performance criteria.

The inclusion of open-ended questions in the questionnaire of the present study provided useful, even if preliminary insights into the nature of OCBs that may facilitate IWBs.

While the results differed across samples, there is certainly emerging evidence that employees who engage in both OCB-O and OCB-I may report higher IWB than employees who engage in either OCB-O or OCB-I at the exclusion of the other (Khaola & Coldwell, 2017*a*). Granted, the results are tentative and preliminary, but they provided evidence that striking a balance between types of OCB may at least not affect IWBs negatively (Khaola & Coldwell, 2017*a*). Referring to the issue of striking a balance between behaviours, Bergeron (2007) suggest that even though OCB takes time away from executing task activities, engaging in OCBs (extra-role behaviours) can be useful if it is balanced by engagement in-role activities as defined in job descriptions.

Fully-fledged qualitative studies such as the one conducted by Vough *et al*. (2017), and longitudinal studies using both qualitative and quantitative daily dairies methodologies (e.g. Amabile, Barsade, Mueller, & Staw, 2005) can arguably provide further insights in the extent to which striking a balance between OCB types can facilitate IWBs, and is certainly a fruitful direction for future research.

5.4. Limitations

While the current study provides key insights into the research problems and questions of concern, like all studies of its nature, it has some limitations that have to be noted. Four major limitations are discussed below.

First, the study collected data based on self-reports, and this is susceptible to common method bias (Podsakoff *et al*., 2003; 2012). While the presence of the common method bias is an enduring research problem that researchers should always try to minimize, in some cases self-reports have become important, and sometimes, only viable tools to obtain research data. For instance, when reporting data

that involve people's attitudes, cognitions, perceptions, and subtle behaviours, an employee is in a better position than other observers (e.g. supervisors and peers) to report more accurate information because s/he has information about the historical, contextual, intentional and other backgrounds of his/her own attitudes and behaviours (Gao *et al*., 2011). Self-reports were used because the present study sought to report on extra-role behaviours such as OCB and IWB. In measuring behaviours that in definition are not detailed in job descriptions such as OCB or IWB, observer measures (e.g. those of supervisors or peers) could also miss genuine employee behaviours and only report on those behaviours that are easily observable, or those intended to impress others (Gao *et al*., 2011; Janssen, 2000). Furthermore, supervisors or peers may make judgements about other peoples' behaviours on the basis of general impression or halo error, which may bias the measures used in studies (Dalal, 2005; Harari *et al*., 2016).

Spector (2006) has specifically suggested that the common method bias is not serious enough to invalidate the results. Along similar lines, several authors have reported consistency of results between self-reports and non-self-reports (Bysted & Jespersen, 2014; Carmeli *et al*., 2006; Janssen, 2000, 2004; Scott & Bruce, 1994, 1998).

In addition to some justifications of using self-reports in certain cases in research; the present study used different approaches to mitigate the problem of common method bias. These approaches included separation of items measuring predictor and criterion variables on the questionnaire; using scales with different anchors and wording; including open-ended questions on the questionnaire; negative wording and reverse-coding of some items; and using Harman's one-

factor test during statistical analyses to examine the common-method-bias (Podsakoff *et al*., 2003; 2012).

In summary, the present study has found that the common method bias, if ever present, was not responsible for all variance in the obtained results. Notwithstanding this conviction, future studies can use different sources to measure the variables deployed in this study.

Second, the cross-sectional, quantitative research paradigm used could not provide evidence of causality of variables. Even though the relationships between variables were defined and assumed *a priori*, reverse causality could not be ruled out. For instance, while it is possible that good leadership influenced workers to be committed as hypothesised, this expectation could not rule out the possibility that committed employees had positive perception of their leaders. Future studies could benefit by incorporating longitudinal and/or experimental research designs to examine the causality of variables used in this study. Qualitative studies can also be used to reinforce the results of the present study.

Third, there should be caution before the results of this study are generalised. The study was based on relatively educated respondents, and also while the sample from the university was selected randomly, the respondents from other organisations were not selected randomly. Furthermore, not all institutions in the country were included in the sample, and this restricts the generalisability of the results. For instance, Bysted and Jespersen (2014) have found that public sector employees identified IWB as extra-role behaviour to be compensated, while private sector employees in their sample identified it as necessary for career development. Even though the present study did not find differences of employees across different organisations, future

studies can benefit by taking stratified random samples of all organisations in the country to test the hypothesised model.

5.5. Theoretical and managerial implications

The findings of this thesis have implications for both theory and practice. The next two sub-sections focus on theoretical and practical implications respectively.

5.5.1. Theoretical implications

Even though some theoretical implications have been implied in different strands of the literature in the main body of this thesis, this subsection consolidates those implications.

The effects of leadership and organisational justice on IWB

The narrative reviews by Anderson *et al*. (2014) and Zhou and Hoever (2014) have concluded that the reliable effects on IWB of both leadership and organisational justice are difficult to ascertain. In response to calls to finding mediating and moderating factors between leadership and IWB (Mumford *et al*., 2002), several authors have successfully included a wide array of mediating and moderating factors, including, to wit, psychological empowerment (Pieterse *et al*., 2009), follower relational identification (Qu *et al*., 2015), role breadth self-efficacy (López-Domínguez, 2013), leader creativity expectations (Qu *et al*., 2015), felt-responsibility for change (López-Domínguez, 2013), openness to experience (Simmons, 2011), creative self-efficacy (Liu *et al*., 2016), learning goal-orientation (Bettencourt, 2004), intrinsic motivation (Zhang *et al*., 2010), creative process engagement (Zhang *et al*., 2010), and others. In the area of organisational justice, most work has focused on indirect effects of interactional justice on IWB, for instance, examining the role played by positive and negative

affect (George & Zhou, 2007), and trust and other social exchange mechanisms (Khazanki & Masterson, 2011).

The present study implies that the list of mediating factors between both leadership and organisational justice, and IWB, can be expanded and reconceptualised. Specifically, the study implies that, because of its social and facilitative nature, OCB can be a potent mediator between both leadership and organisational justice, and IWB. Because IWB is risky, OCB can 'lubricate the social machinery of the organisation', and hence can provide the psychological safety for employees to take calculated risks (Naqshbandi *et al*., 2016: 202; Shalley & Gilson, 2004). While earlier studies have shown the importance of relatedness and social capital in facilitating creativity and innovation (Chen *et al*., 2013; Perry-Smith & Mannucci, 2017), this is probably the first time that the role of OCB is directly conceptualised and empirically examined in facilitating the relationships between both leadership and organisational justice, and IWB. In a broader scheme of things, it could well be meaningful and justifiable to redefine OCB along the prescriptions of LePine *et al*. (2002: 61) as a 'manifestation of cooperativeness at work'; or put more precisely; as 'a general tendency to be cooperative and helpful in organisational settings'.

In summary, the present study provides evidence of a socially-constructed context (OCB) through which leadership; organisational justice; and commitment may be linked to IWBs. This perspective resonates well with the recent work by Vough *et al*. (2017). In contrast to the extant literature that has focused on social context as an input or outcome of proactivity (self-initiated, future-focused actions aimed at bringing change in organisations), they suggest that proactivity can actually be a function of the context in which it occurs. Along similar

lines, this study calls for research that re-examines OCB as a context in which IWBs and perhaps other proactive behaviours can flourish.

The relationships between OCB and IWB

Another theoretical implication concerns the relationship between OCB and IWB. While OCB has been compared to other proactive behaviours such as voice (Marinova *et al*., 2010; Van Dyne & LePine, 1998), taking charge (Morrison & Phelps, 1999), and personal initiative (Frese & Fay, 2001); little is known about the relationships between OCB and IWB (Turnipseed & Turnipseed, 2013; Xerri & Brunneto, 2013). While this is surprising because the two constructs are theoretically related (Turnipseed & Turnipseed, 2013), this paucity is in line with the general lack of research on change-oriented OCBs in the literature (Bettencourt, 2004; Choi, 2007; MacKenzie *et al*., 2011).

The results of this study confirm that the two constructs are related but distinct. The exploratory and confirmatory factor analyses have given credence to this result. In general, the results of this study suggest that future studies can benefit by separating the change-oriented and affiliation-oriented OCBs. Put differently, this study provides evidence that the categorisation of change-oriented versus affiliation-oriented OCB is justified, and can benefit the extension and accumulation of knowledge in the broader field of extra-role behaviours in general, and OCB in particular (Chiaburu *et al*., 2013). Another related implication is that, in addition to task performance, OCB, and counterproductive work behaviour, creative and innovative performance (IWB) may be a stand-alone indicator of performance criteria along the lines described by Harari *et al*. (2016). However, while existing theory and evidence suggest that OCB may be a precursor of IWB, because of the cross-sectional nature of this study, it was not possible to provide definitive evidence of the temporal or

causal ordering between the two focal constructs. Qualitative studies such as the one conducted by Vough *et al*. (2017) can provide useful directions in this regard.

The concurrent effects of organisational justice and commitment on OCB

In the OCB literature, researchers are yet to provide consistent results with respect to how commitment or job satisfaction relates to OCB when the relationship between organisational justice and OCB has been controlled for (Fassina *et al*., 2008*a*). Earlier studies have either found direct relationships (Fassina *et al*., 2008a; Organ & Ryan, 1995) or no link between the above antecedents and OCB (Moorman *et al*., 1993). In line with some earlier studies (e.g. Lavelle *et al*., 2009; Lehmann-Willenbrock *et al*., 2013), this study provides evidence that affective commitment mediates the positive relationship between organisational justice and OCB. This finding, while preliminary, propounds that affective commitment may be a more effective mediator than general organisational commitment between organisational justice and OCB disputed in some earlier studies. The general implication of this finding is that affect (positive or negative) may mediate the positive relationship between organisation justice and OCB (Colquitt *et al*., 2013). Compared to popular social exchange processes, this finding raises intriguing questions regarding the nature and extent of explanation (mediation) made by affect on the relationship between supervisor-related behaviours and OCB. As such, affect (emotions and moods) provides a promising alternative perspective to social exchange processes in explaining the relationships between the focal constructs in this study (Colquitt *et al*., 2013). An extension of this implication requires that future work examines the role of affect (moods and emotions) within the broader

theoretical framework of emotions, for example, the Broaden-and-Build Theory of positive emotions (Fredrickson, 2004). To wit, this theory holds that positive emotions 'broaden one's thought-action repertoires', which in turn promotes discovery of novel ideas and social bonds (Fredrickson, 2004).

The differential effects of predictors on creativity (idea generation) and innovation (idea support and implementation)

One last theoretical implication of the present study relates to the importance of separating creativity and innovation in future studies. While the call for this approach is not new, there is a tendency to subsume the two concepts into one overall construct (Anderson et al., 2014; Janssen, 2000; 2004). The present study found that the correlations with almost all the presumed predictors with creativity and innovation were significantly different, with correlations higher with regard to innovation, while relatively lower with regard to creativity. This finding, while preliminary, implies that innovation is more likely to be influenced by social factors than creativity. Future studies can examine in detail the role played by theories such as Behavioural Plasticity Theory (the extent to which behaviour is influenced by social experiences, Rank *et al*., 2009), and Social Exchange Theory (Blau, 1964) in explaining the observed differences.

In general, the finding in relation to the differential effects of predictors on creativity and innovation holds promise for articulating various means of understanding creativity and innovation in organisations.

5.5.2. Managerial and practical implications

In addition to implications for theory and research, the results of this thesis have implications for general managers and human resources practitioners.

Selection practices

Selection practices are some of the key human resource practices that help organisations get appropriate people they need.

First, organisations can hire managers who are likely to develop transformational leadership skills. In practice this requires organisations to hire managers with certain personality traits. For instance, it is known that extraversion and emotional stability personality traits predict transformational leadership behaviours (Wang *et al*., 2011), and hiring managers with those traits can plausibly increase the chances of hiring transformational leaders.

Overall, this study confirms that leadership matters for IWB (Mumford *et al*., 2002), and it is possible that hiring effective leaders can boost IWBs directly and indirectly through committed employees who exhibit OCB.

Second, organisations may similarly use selection procedures and practices that are predictive of employee citizenship behaviour. In this regard, identifying and hiring people who are committed to helping others can directly boost OCB in organisations (Naqshbandi *et al*., 2016). One personality trait that is quite predictive of OCB has been identified as conscientiousness (Podsakoff *et al*., 2000), and hiring applicants with this trait can arguably increase OCBs in organisations in question.

Third, creativity and innovations gains can also be achieved by hiring applicants who have proclivity to engage in creative performance. At

the broader level, Chiaburu *et al*.'s (2011) meta-analytic study found that the pro-social alpha factor (comprising of agreeableness, conscientiousness, and emotional stability) was primarily related to OCB (OCB-O and OCB-I), while the agentic beta factor (consisting of extraversion and openness to experience) was primarily related to change-oriented OCB. Taken together, it is possible that organisations can boost OCB and IWB by hiring applicants with high agreeableness and high openness to experience respectively.

In the context of the current study, it is probable that hiring managers with appropriate leadership skills is more important in private and public sector organisations than in academic settings. This is likely so because, as indicated earlier, university employees are relatively educated, and as such, may be more capable of self-leadership than employees in other sectors (Carmeli *et al*., 2006).

While selection practices based on certain personality traits can be predictive of important factors in this study (e.g. leadership, OCB and IWB), developing competent managers who can shape subordinate attitudes is equally important (Chiaburu *et al*., 2011). The implications for training practices are discussed next.

Training practices

Employee training and management development are some of the key human resource practices organisations use to increase the knowledge, skills and abilities (KSA) required to directly and indirectly boost OCB and IWB (extra-role behaviours) in organisations. Specifically, managers can be trained to develop leadership and fairness skills. The results of the present study suggest that leadership and organisational justice (fairness) influence affective commitment, which in turn affect OCB. This OCB finally affects IWBs by probably

creating a supportive social context in which IWBs can flourish. Thus managers can be trained to practice a full-range leadership behaviours and fairness, which may promote organisational commitment, OCBs, and ultimately, IWBs. In academic settings, specialised training programmes for heads of department (HOD) and deans on how to lead academic programmes and staff can be fruitful in stimulating employee affective commitment, OCB, and ultimately IWBs.

Training programmes that impart cooperation, teamwork and taking personal initiative that exceeds one's described duties (OCB) can also be effective in creating a supportive context in which IWBs flourish (Naqshbandi *et al.,* 2016).

Fortunately, research indicates that managers can be trained on all the above issues, with quite substantial results (Skarlicki & Latham, 1997; Wang *et al*., 2011).

Rewarding and evaluating extra-role behaviours

Managers can also increase extra-role behaviours through reward practices (Naqshbandi *et al*., 2016; Shalley & Gilson, 2004). In its original sense, OCB was described as the behaviour that is not rewarded, at least not directly by an organisation or its agents (Organ, 1988, 1997). Similarly, earlier research indicated that extrinsic rewards in general (Amabile, 1996), and contingent rewards in particular (Mumford *et al*., 2002), were perceived to be detrimental for creativity and innovation in organisations (Baer *et al*., 2003; Shalley & Gilson, 2004).

Notwithstanding viewpoints of earlier research, the present study found that 'active constructive leadership' (consisting of transformational leadership and contingent reward leadership, Avolio *et al*., 1999), was predictive of OCB and IWB. The recommendation

that managers can reward extra-role behaviours is not new in the literature; and one can argue; its harmful effects on performance criteria are not clear (Baer *et al*., 2003).

That managers have a tendency to reward good citizens (those who engage in OCBs) through pay raises and promotions is now an accepted notion in the OCB literature (Allen, 2006; Organ, 1997). Similarly, even though the role of external rewards on creativity remains a subject of hot scholarly debate (Anderson *et al*., 2014; Zhou & Hoever, 2014), there is evidence that rewards can contribute to creativity (Mumford *et al*., 2002), or at least that intrinsic motivation (emanating from work) and extrinsic motivation (emanating from external rewards) sometimes combine synergistically to support creativity (Amabile & Pillemer, 2012).

In the context of universities, academic staff could be recognised for innovative teaching and research. Similarly, senior academic staff (professors) could be incentivised for mentoring junior academic staff.

Overall, rewarding employees that are creative and innovative can signal to employees that IWB is desirable (Shalley & Gilson, 2004). What is beyond doubt though, is that punishing people who fail to meet goals is bad for creativity and innovation (Mumford *et al*., 2002), and most probably it is equally bad for other proactive behaviours done at the discretion of the employee.

Rewarding OCB and IWB has implications for performance evaluation and feedback. Whilst the effects of external evaluation and feedback on these forms of performance remain inconclusive, evaluating and giving feedback to employees in a more informational rather than controlling manner may have positive effects on employee intrinsic motivation (Shalley & Gilson, 2004). For example, organisations of

employees that participated in this study can benefit from using performance appraisal systems that are developmental in nature.

Overall, research suggests that rewarding extra-role citizenship behaviours may encourage employee engagement in those behaviours.

It should be noted that selecting employees, training them, appraising and rewarding them on OCBs and IWBs should be done in a coherent manner. In other words, these human resource practices should be linked systematically, coherently and synergistically to each other to produce the desired results (Shalley & Gilson, 2004).

Creating the supportive and social context for extra-role behaviours

Linked to the above points, leadership behaviours and fairness can be enablers of a context, or be part of a social context in which extra-role behaviours can flourish. Drawing on prior research, Chiaburu *et al*. (2013) identify leaders, co-workers and the organisation as key sources of support of change-oriented OCBs in work contexts. Similarly, Khazanchi and Masterson (2011) found that interactional justice (interpersonal and informational justice) from the organisation and supervisors created trust, which had some influence on creativity. The present study supports these earlier findings, and hence suggests that managers and organisations can create a supportive social environment in which employee positive attitudes (e.g. organisational commitment), affiliative OCB, and change-oriented OCB (IWB) can flourish. Practically speaking, organisations can create supportive social contexts in which IWBs flourish by encouraging supervisors and co-workers to support each other in their daily activities. For example, academic staff can form communities of practice to share ideas and tips for research purposes. Within the creativity domain, Shalley and

Gilson (2004) argue that one common theme across studies is that employees should feel that they are working in supportive contexts.

Targeted interventions on creativity and innovation

The results of this study provide evidence that creativity and innovation are predicted by different factors, and as a result, there is much to be gained by designing targeted interventions depending on what the organisation wants to achieve.

Overall, the results indicate that leadership, organisational justice, OCB and commitment had more pronounced impact on innovation (idea support and implementation), while they had subdued or no relationships with creativity (idea generation). It can therefore be submitted that, in general, managers have higher chances of influencing innovation through the above factors, while they may have little chances of influencing creativity through the same tactics. This is not surprising because extant literature shows that a person has different needs in the creativity-innovation journey. For example, Perry-Smith and Mannucci (2017) posit that at the idea generation phase, a person needs cognitive flexibility; at the idea elaboration phase she needs support from others; at the idea championing phase she needs social influence and legitimacy; and at the idea implementation phase she needs shared vision and understanding. As posited by Perry-Smith and Mannucci (2017), the involvement and support of others become more direct, active and intentional as the idea journey evolves from creativity to innovation.

More specifically, the present study suggests that while leadership and OCB may have some statistically significant, albeit small relationship with creativity (idea generation), organisational justice and affective commitment may have no relationship with creativity. From the

practical standpoint, these results suggest that while fairness and affective commitment are effective determinants of other forms of performance, they may not directly influence creativity at work (Jaros, 2010; Khazanchi & Masterson, 2011). Drawing from other studies, the present study recommends that practitioners who aspire to directly stimulate creativity can use selected personality traits, requisite knowledge and abilities, and intrinsic motivation (Amabile, 1996); especially in social and task contexts that are conducive for creativity and innovation (Anderson *et al*., 2014; Shalley & Gilson, 2004; Zhou & Hoever, 2014).

Some results of the present study, while admittedly preliminary, also suggest that OCB has had the highest chance of influencing both creativity and innovation. As indicated in the overall model of the study, this may derive from the suggested position of OCB as the most proximal behaviour to IWB. Perry-Smith and Mannucci (2017:58) have posited that intrinsic motivation (which is important for creativity) flourishes in social contexts characterised by relatedness and social capital; the very contexts which can be created by OCB (Naqshbandi *et al*., 2016). It is submitted therefore that organisations can stimulate both creativity and innovation in organisations through enabling OCBs. While also preliminary, and certainly at an embryonic stage of research, this study suggests that managers can balance OCBs to boost the chances of stimulating IWBs (Khaola & Coldwell, 2017*a*).

It is worth noting that the recommended targeted intervention on creativity and innovation does not imply that the two stages of IWB can be undertaken without the influence of the other. For instance, Mumford *et al*., (2002:708) suggest that idea implementation may call as much creativity as idea generation. The core issue presently is that, depending on the stage in the process, emphases on the interventions

can differ. For instance, while OCB can influence both creativity and innovation, the results suggest that OCB can be more effective during innovation stages.

5.6. Prospects and future research directions

Despite the promising results of the present study, some issues remain unresolved. These issues will hopefully become the springboard for future research in this area.

First, the present study assumed that extra-role behaviours (OCBs and IWBs) are always good without dark sides. This *concept maximisation fallacy* (Anderson et *al*., 2014; Zhou & Hoever, 2014) has recently been challenged by several authors (Anderson et *al*., 2014; Bergeron, 2007; Coldwell & Challaghan, 2014; Khaola & Coldwell, 2017a; Vigoda-Gadot, 2006, 2007). Overall, the growing number of studies suggests that the effectiveness of these behaviours may not be as straightforward as was previously thought. For instance, Bergeron (2007) suggests that focusing on OCBs may compromise employee outcomes that rely on task performance such as promotions, and Koopman *et al*. (2016) posit that helping behaviour (OCB-I) may reduce the perception of progress towards goal achievement. The conceptual heuristic device suggested by Coldwell and Callaghan (2014) emphasises that striking the balance between OCB-I and OCB-O could improve goal achievement, and while preliminary, the study by Khaola and Coldwell (2017*a*) presented evidence that striking the balance between OCB-I and OCB-O may positively affect IWBs. Future research questions can focus on conditions under which extra-role behaviours may be good or bad for organisations and individual employees alike.

Second, another hotly debated issue is predicated on whether or not organisational citizenship behaviours are perceived as in-role or extra-role by employees. Based on extant literature, the present study provided evidence that OCBs facilitate engagement in IWBs. However, an alternative explanation might be that employees who enlarged the scope of their in-role behaviours engaged in IWBs. In fact, there is evidence that some behaviours that have traditionally been described as OCBs (extra-role) are defined by some employees as part of their jobs (Chiaburu & Byrne, 2009; Coyle-Shapiro *et al*., 2004; Kamdar *et al*., 2006; McAllister *et al*., 2007; Morrison, 1994; Tepper *et al*., 2001; Van Dyne *et al*., 2008; Vey & Campbell, 2004). Furthermore, even though the present thesis has considered IWB largely as extra-role in nature (Janssen, 2000; 2004), some scholars observe that the concept may involve in-role and extra-role elements (Potoňik & Anderson, 2016; Tuominen, & Toivonen, 2011).

In summary, it is not clear whether OCBs facilitate IWBs, or whether people who engage in IWBs psychologically expand the boundaries of their jobs. Future studies can benefit by incorporating role definitions (Morrison, 1994), and job crafting approaches (Wrzesniewski & Dutton, 2001) when they delineate the relationships between OCBs and IWBs.

The third important issue for future research relates to how OCBs were assessed in the present study. For purposes of aggregation and parsimony, the present study used general OCB scale to assess OCBs of employees in different sectors. However, since OCBs may be context-bound, slightly different scales may be justified (Farh *et al*., 1997; 2004). For instance, Farh *et al*. (1997; 2004) suggested the scale to be used in China; DiPaola and Tschannen-Moran (2001) suggested the scale to be used in schools; Bergeron *et al*. (2014)

suggested the scale to be used in higher education institutions; and Dekas *et al*. (2013) suggested the scale to be used among knowledge workers. While the content of these scales do not differ substantially from the content of existing scales, and the results of the pilot study that used one such specific scale did not alter the general trends observed, future studies can use specific OCB scales to examine if the results could be different in different sectors, settings, and types of employees.

Fourth, future research can examine the impact on both OCB and IWB of the interaction of social context (leadership and fairness) and individual differences (e.g. affective commitment). While the present study aptly focused on factors that may explain (mediate) the positive relationships between social contextual factors (leadership and fairness) and IWBs, there is further need and scope to examine the boundary conditions (interaction between variables) within which the relationships exist. The narrative reviews by both Anderson *et al*. (2014) and Zhou and Hoever (2014) have called for more research on the impact of the interplay between the actor's and context variables on creativity. Along similar lines, the meta-analytic study by Chiaburu *et al*. (2011) has called for the examination of the impact on both affiliation-oriented and change-oriented OCBs of the interaction between the social context and big five personality traits (extroversion, conscientiousness, neuroticism, agreeableness, and openness to experience).

Thus in addition to examining the explanatory mechanisms that form the core proposition of the present thesis, another potentially fruitful line of research in this area is interactionist in nature (Zhou & Hoever, 2014).

The fifth worthwhile line of research in this area centres on the interplay among different social contexts. Drawing on prior research, Chiaburu *et al*. (2013) have identified three sources of support in social contexts – leaders, co-workers, and the organization. The present study focused predominantly on social context created by leaders (i.e. leadership and supervisor fairness). While the present study has provided useful and timely insights into how leader-referenced social context influenced IWBs, other elements of social context, while broadly acknowledged, were not directly included in the study.

Future studies can benefit by concurrently factoring in all three sources of support (leaders, co-workers and organisation). The meta-analytic study by Chiaburu *et al*. (2013) has been singularly instructive in revealing the value of including predictors across the social context rather than limiting the study to one source of support. These authorities have presented evidence that the three sources of support have unique effects on change-oriented OCBs (operationalized as voice, creative and innovative performance, adaptive performance, personal initiative, positive proactive behaviour, and taking charge). Most importantly, Chiaburu *et al*. (2013) observe that no source of support explained incremental effects in excess over the other, implying that no source has had unique relative importance, but that all three are needed in predicting change-oriented OCBs. Following Parker, Williams and Turner (2006), they specifically suggest that focusing on supervisory behaviours alone is unlikely to be sufficient to influence proactivity among employees. Chiaburu *et al*. (2013) however note that even though the direct relationships and effect sizes magnitudes in their study were promising, additional research is needed to uncover intervening processes. Since the present study

uncovered some of those intervening processes, combining the goals of the present study and those of Chiaburu *et al*.'s (2013) study could arguably result in a more comprehensive future project capable of better articulation, refinement and accumulation of knowledge in this area.

The sixth fruitful direction for future research involves examining other mediators in the link between both leadership and organisational justice, and IWBs or other change-oriented OCBs. While earlier work included a promising variety of mediating factors between leader support factors and IWBs (Zhang & Bartol, 2010), some potential mediators have not been given the attention they deserve.

One such potential mediator is affect (emotions and moods). For instance, Colquitt *et al*. (2013) provides evidence that affect holds promise for mediating (explaining) the relationships between organisational justice and affialitive OCBs. Future studies can build on Colquitt *et al*.'s (2013) proposition and examine the intervening mechanism of affect between elements of social context (leadership and fairness) and change-oriented OCBs (e.g. IWB). It is possible that organisational justice or leadership may evoke employee positive emotions (Colquitt *et al*., 2013), and since positive emotions can 'broaden thought-action repertoires' of employees (Broaden-and-Build Theory, Fredrickson, 2004); the mediating role of affect holds promise for explaining creative and innovative performance (IWB) in organisations. As suggested by Colquitt *et al*. (2013), affective approach provides a viable alternative explanatory mechanism which has largely been ignored by researchers of social exchange relationships.

Other intervening explanatory mechanisms worth investigating include job characteristics, work engagement, and social capital.

Both Purvanova *et al*. (2006) and Piccolo and Colquitt (2006) found that the positive relationship between leadership and OCB was mediated by job characteristics. Future studies can build on Purvanova *et al*.'s (2006) study, Piccolo and Colquitt's (2006) study, and the results of the present study and examine if the positive relationship between leadership and IWB is not successively mediated by job characteristics (meaning) and OCB. There are good reasons to believe that supportive and fair leaders can create perceptions of jobs that are meaningful; and in turn meaningful jobs may prompt employees to engage in OCBs (Piccolo and Colquitt, 2006; Purvanova *et al*., 2006); and ultimately, OCBs can augment the performance of IWBs.

Agarwal (2013) found that work engagement mediated the relationship between certain predictors (leader-member exchange and perceived organisational support) and IWB (criterion variable). A year later, Agarwal (2014) found that trust and work engagement successively mediated the relationships between another set of predictors (psychological contract, procedural justice, and interactional justice) and IWB (criterion variable). Along similar lines, future studies can fruitfully examine the extent to which work engagement and OCB successively mediate the relationship between social context (leadership and supervisor fairness) and IWBs.

Along with the above potential mediators, recent research has positioned social capital (useful social networks and work relationships) and relational identification (extent to which one defines oneself in terms of the role relationships with one's leader or co-workers, Qu *et al*., 2015) as mediators between transformational leadership and creativity or innovation. More specifically, Chen *et al*. (2016) found that the measures of internal and external social capital mediated the relationship between CEO transformational leadership

and organisational innovation. At the more relational level of self, Qu *et al*. (2015) found that follower relational identification with their leader mediated the relationship between transformational leadership and follower creativity, especially when the leader creativity expectations were high. While the present thesis conceptualised affiliation-oriented OCB as the variable that may create cooperation, trust and interpersonal relationships at the workplace (social capital) worthy of facilitating creativity and innovation, future studies can usefully examine the extent to which commitment and social capital successively mediate the relationships between social context (leadership and supervisor fairness) and IWB. It is possible that leadership and fairness can prompt employees to be affectively committed to their organisations; who in turn can create and mend social relationships with significant others for the sake of their organisations; the relationships which can ultimately facilitate IWBs.

While the theoretical importance of locating many explanatory mechanisms (mediating variables) between social contextual factors (leadership and fairness) and IWB may be justified in terms of knowledge accumulation and expansion, one may challenge the utility of locating many such explanatory variables for practitioners. This thesis contends that a variety of ways of explaining this relationship is required for both theory development and practice. The core reason for this is that organisations differ in many fundamental ways, and what works in one organisation may not work in another. For instance, two organisations may aspire for creative and innovative performance of employees (IWB), and while one organisation may pursue a high-commitment work strategy, another organisation may pursue a different work strategy. In this case the organisation that pursues a high-commitment strategy may train leaders to boost IWB through

commitment and intrinsic motivation of employees, while another organisation may boost it through selection of employees with high creative self-efficacy.

In summary, this thesis contends that, in addition to the mediating factors located presently, researchers should explore and create a menu of other factors that can explain positive relationships between leadership or fairness and IWBs.

The last issue this thesis recommends for future research relates to the role of transactional leadership in performance of extra-role behaviours. While the present study suggested many plausible speculations underlying this relationship, in its present form, it could not fully resolve why contingent-reward leadership (form of transactional leadership) was associated with extra-role citizenship behaviours. Even though theoretical wisdom accumulated over decades suggests that extrinsic rewards may be detrimental to performance criteria (Amabile, 1996; Mumford *et al*., 2002), there is evidence that extrinsic rewards may positively influence creative and innovative performance (Mumford *et al*., 2002; Shalley & Gilson, 2004). Thus clarity on the role of transactional leadership on IWB in general, and on the boundary conditions in which transactional leadership can facilitate or inhibit IWBs in particular, need to be investigated in future studies. Along these lines, the study by Baer *et al*. (2003) found that the relationship between extrinsic rewards and creativity varied as a function of job complexity and employee cognitive style. Specifically, Baer *et al*. found that extrinsic rewards related positively to creativity for employees occupying simple jobs, while relating negatively for employees holding complex or challenging jobs. They also found that innovators in complex jobs were not

affected by rewards, while adopters in simple jobs were most affected by rewards.

In the present study, it is possible that the impact of the contingent reward leadership on IWB can interact with affective commitment such that the relationship is stronger for employees with lower affective commitment, and relatively weaker for employees with high affective commitment. This is because affective commitment may be a substitute for contingent reward leadership. An examination of additional boundary conditions provides a fruitful avenue for future research.

5.7. Conclusions

The extant research indicates that creative and innovative work behaviours are critical for success of organisations in the current dynamic environment (Anderson *et al*., 2014). Research indicates however that the effects of social context (leadership and fairness) and organisational commitment on IWBs are equivocal (Jaros, 2010; Khazanchi & Masterson, 2011; Mumford *et al*., 2002; Zhou & Hoever, 2014).

The primary aim of this thesis was to develop and test a theoretical model in which both leadership and organizational justice associate with IWBs through the successive mediating roles of affective commitment and OCB. The secondary aims were to a) delineate the theoretical and empirical relationships between OCBs and IWBs, b) examine how leadership, organizational justice and affective commitment concurrently associate with OCB, c) evaluate if variables differentially predict components of IWB (creativity and innovation), and d) explore the nature and types of OCBs that facilitate the performance of IWBs.

To achieve these aims, the study relied primarily on a cross-sectional, descriptive and quantitative-dominant research paradigm incorporating an added open-ended question that was analysed qualitatively to bolster quantitative data. Overall, 263 useful questionnaires collected from a sample of 459 employees formed the bases of the primary study; and correlations, ANOVA, factor analyses, and structural equation modelling techniques based on SPSS and AMOS software packages were mainly used to analyse data.

The central problem across existing literature can be summed as lack of consistent relationships between both leadership and fairness (social context) and IWBs (Anderson *et al*., 2014; Khazanchi & Masterson, 2011; Mumford et al., 2002; Mumford & Licuanan, 2004; Pieterse *et al*., 2010; Potoňik & Anderson, 2016; Vigoda-Gadot & Beeri, 2011; Zhou & Hoever, 2014). The present study provided evidence that affective commitment and OCB mediated the positive relationship between social context (leadership and fairness) and IWBs. While many studies have attempted to resolve the problem identified in this study by including some moderating and mediating variables, this study was different because it provided a different perspective consisting of two mediating variables (2-step mediation) which have hitherto not been examined in the literature. Another unique contribution of the present thesis was that it included both leadership and organisational justice in one model, and examined their indirect effects on IWBs. Most prior studies examined the effects of either leadership or organisational justice on IWB, and hardly both at the same time.

The study also focused on the relationships between OCBs and IWBs in detail. Even though the two constructs are conceptually related, and historically originate from similar sources (Podsakoff et al., 2000), the

nature, and extent of their relationships are yet to be thoroughly examined (Turnipseed & Turnipseed, 2013; Xerri & Brunneto, 2013). The disconnected streams of literatures among performance constructs militate against implicit research goals of knowledge accumulation and theoretical development (Carpini & Parker, 2017).The present study found that the two are closely related, but distinct concepts. While preliminary, the study also found that striking a balance between OCB types can be good for performance of IWBs. Since the present study relied on literature to suggest the temporal and causal ordering of these two constructs, future studies could build on this assumption, and use longitudinal studies to determine empirically such temporal and causal ordering. Overall, this study tentatively concludes that OCB (affiliation-oriented OCB) and IWB (change-oriented OCB) are distinct concepts that can be developed further without fear of redundancy in research.

Another issue identified as worthy of research in this study related to the association between organisational commitment and OCB, while controlling for the association between organisational justice and OCB. Specifically, researchers are yet to agree on whether a) organisational commitment and organisational justice have direct relationships with OCB; b) organisational commitment mediates the relationship between organisational justice and OCB; and c) organisational commitment does not associate with OCB once organisational justice has been controlled for (Fassina et al., 2008*a*). Based on persuasive arguments deriving from SET, Context-Attitude-Behaviour Framework, and commitment devoid of calculative elements (affective commitment), this thesis hypothesised and confirmed that the mediated model fitted data reasonably well. While this study can by no means assert to have resolved this elusive research problem, it can certainly recommend

future studies to use strong theoretical frameworks to bring this issue to realistic finality.

Another key issue that has largely been practically overlooked by researchers of creativity and innovation is in relation to the tendency of researchers to subsume creativity and innovation into one concept of IWB (Anderson et al., 2014; Scott & Bruce, 1998; Janssen, 2000). In line with earlier commentaries, the present research confirmed that creativity (idea generation) and innovation (idea support and implementation) are related, but distinct processes of IWB (Binnewies & Gromer, 2012; Zhou & Hoever, 2014; Perry-Smith & Mannuci, 2017). More specifically, this research has presented evidence that different predictors (leadership, justice, affective commitment, and OCB) had higher correlations with innovations, while having relatively lower correlations with creativity. As a result, the present thesis concludes that management researchers stand to gain more, both theoretically and empirically, if they analyse the two concepts separately in research.

Having established that OCBs facilitated IWBs in the present research, the pertinent emergent question in this vein was to explore the nature and types of OCBs that can facilitate the performance of IWBs. Drawing from Entropic Citizenship Behaviour conceptual heuristic device, Conservation of Resources, Social Identification, Attention Capacity and Resource Allocation Theories (Khaola & Coldwell, 2017*a*), this thesis made use of collected, categorised, and codified OCB behavioural data from open-ended questions asked to employees to get some insights into this research problem. While preliminary, this thesis concludes that striking a balance between OCB types (OCB-I and OCB-O) has a realistic potential of facilitating the performance of IWBs in organisations.

Overall, the main question asked in this thesis can be repackaged as follows: Do effective and fair leaders influence IWBs of employees by deepening their affective commitment and engagement in OCBs? The results confirm that the effects of both leadership and organisational justice on IWB were successively mediated by organisational commitment and OCB. It is hoped that this new set of explanatory mechanisms will further clarify the link between the elements of social context (leadership and fairness) and IWBs; add to the laundry list of mediating variables that not only help in advancement and accumulation of knowledge in this area; and help managers to improve the creative and innovative profile of their organisations.

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APPENDIX 1
PILOT STUDIES

1. Introduction

Chapter 3 provided the general research methodology used to gather evidence necessary to address the research hypotheses and questions advanced in this study. However, because extra-role behaviours may vary from one organization to another and from one country to another (Farh et al., 2004; Farh et al., 1997), it was deemed necessary to pilot the instruments in a new setting of study - Lesotho. To my knowledge, this was the first study of its kind to be conducted in Lesotho.

Even though pilot studies (a.k.a. feasibility studies) are conducted for a range of useful reasons in research, results of such pilot studies are rarely fully reported (Van Tiejlingen & Hudley, 2010).

The aim of this appendix was therefore to provide information on how the instruments and approaches used to collect data were piloted before being used in the primary study. Put differently, the pilot studies were conducted to examine the adequacy and appropriateness of research instruments for the primary study. I concur with the growing sentiments indicating that researchers have an ethical obligation to report issues arising from their studies, including the pilot phase (Van Tiejlingen & Hudley, 2010).

The reliability and validity of research instruments were initially tested on a sample of 95 professional teachers who attended part-time classes for their Bachelor of Education Primary (BED Primary) at the National University of Lesotho (Sample 1), and were later confirmed in net samples of 50 additional teachers from 8 different high schools

(Sample 2), and 69 employees from various private and public organisations in Maseru (Sample 3).

Overall, the present study was piloted on 214 participants.

The Cronbach's alphas and exploratory factor analyses were respectively used to examine the internal reliability of scales and the dimensionality (validity) of variables. The Kaizer-Meyer-Olkin (KMO) test in all samples indicated an adequate figure of 0.6 and better, and the Bartlett's test of sphericity (X^2) was significant in all samples, somewhat indicating the validity and suitability of responses given. Correlation between variables in the model was used as a test for simple predictive and practical validities. Because of small samples in the pilot studies, I did not use advanced statistical tools such as confirmatory factor analysis to evaluate the psychometric properties of scales.

2. Sample 1

With the permission of one of the facilitators, participants recruited from the University were requested to fill a questionnaire during class hours. In addition to information provided on the cover letter, the purpose of the study was verbally communicated to participants. They were informed that participation in the study was optional, and that participation or nonparticipation would not affect their academic performance. Anonymity and confidentiality were guaranteed. Overall, 95 useable questionnaires were returned, a return rate of eighty-six per cent. Of the respondent sample, seventy-two per cent were females, and twenty-eight per cent were males. Twelve per cent of the respondents were in the age group 20 to 30; sixty-five per cent were in the age group 31 to 40; twenty-two per cent were in the age group 41 to 50; and one person (1%) was above 50 years of age. The participants had an average tenure of 11 years (range 4-28 years;

SD=11). The data collection instrument was modified slightly to reflect the organizational environment of teachers. For instance, 'my supervisor' was replaced with 'my principal'; 'my organisation' with 'my school'; and 'employees' with 'teachers'.

2.1. Measures, coding and scale reliabilities

Unless stated otherwise, the scales described in the general methodology section (Chapter 3) were used to measure the variables in the pilot studies.

Leadership: The Multifactor Leadership Questionnaire (MLQ) (Bass & Avolio, 1995) was used to assess the leadership behaviour of supervisors (principals). The participants were asked to assess the extent to which the listed statements described the behaviour of their supervisors (principals) on a scale ranging from 0 (not at all) to 4 (frequently if not always). Sample item was 'my principal articulates a compelling vision for the future'. The internal reliability for transformational leadership was 0.89, and that for contingent-reward leadership was 0.61. Factor analysis (principal components, varimax rotation) yielded one factor (Cronbach's alpha = 0.90). Since in this study my focus was on *active constructive leadership* (comprising of transformational leadership and contingent-reward leadership) which does not include corrective, avoidant or management-by-exception components of full-range leadership theory (Avolio et al., 1999), I aggregated the two forms of leadership into one summative scale. This approach is in line with studies that found out that supportive leadership reward behaviour 'loads on transformational leadership factor instead of the transactional factor' (Yukl, 1999: 287).

Organisational justice: The scale developed by Niehoff and Moorman (1993) was used to assess organisational justice. Table A1 shows

factor analysis (principal components, varimax rotation) of items measuring organizational justice in which loadings below 0.4 were suppressed. Factor one represents procedural justice and interactional justice (Cronbach's alpha = 0.72), and factor two represents distributive justice (Cronbach's alpha poor at 0.37). To measure organizational justice the two items tapping into distributive justice were omitted because their deletion improved the internal reliability of the scale from 0.57 to 0.72.

Table A1: Factor analysis of organisational justice items

	Factors	
	1	**2**
When making decisions about my job, my principal offers explanations that make sense to me	.812	
When decisions are made, my principal treats me with respect and dignity	.788	
To make job decisions, my principal collects accurate and complete information	.730	
All decisions are applied consistently across all affected teachers	.593	
I consider my work load quite fair		.795
I think that my level of pay is fair		.738
Variance explained (%)	36	21
Extraction Method: Principal Component Analysis. **Rotation Method**: Varimax with Kaiser Normalization.		

Organisational commitment: Five items from the scale of Cook and Wall (1980) were used to measure affective commitment. The Cronbach's alpha of the five items was 0.77, but since the omission of one item from the scale improved the reliability of the scale from 0.77 to 0.89, the item was omitted. This is the sole item that falls under

factor 2 in Table A2. Though the internal reliability of the scale was acceptable (Nunnally, 1978), I felt that the item would have to be modified or replaced in subsequent scales. While this item taps into affective commitment measure, it also reads like helping OCB behaviour.

Table A2: Factor analysis of affective commitment items

	Factors	
	1	**2**
I am quite proud to tell people about the school I work for	**.864**	.055
I feel a strong sense of belonging to my school	**.943**	-.009
I am quite proud to be part of my school	**.899**	-.070
I can recommend a close friend to work for my school	**.780**	.109
I am willing to put myself out to help my school	.026	**.996**
Variance explained (%)	61	20
Extraction Method: Principal Component Analysis. **Rotation Method**: Varimax with Kaiser Normalization.		

Organisational citizenship behaviour: Ten items adapted from the scale developed by Podsakoff et al. (1990) were used to measure this construct. Factor analysis of these items did not result in an expected factor structure. However, after the omission of two items from the scale (I attend functions that are not required but that help the image of the school, and I do not take extra breaks from work), the

Cronbach's alpha of an overall OCB scale was moderate at 0.61. The internal reliability of OCB-I was 0.65, but that of OCB-O was too small to allow any meaningful aggregation of items into a reliable variable.

Innovative work behaviour: Nine items from the scale of Janssen (2000) and two items from the scale developed by de Jong and den Hartog (2010) were used to measure individual innovative work beheviour. The Cronbach's alpha of the 11 items was 0.86. When the 11 items were subjected to factor analysis (principal components, varimax rotation), one item - *creating new ideas for difficult issues* - loaded ambiguously on two factors. Even though after omitting this item from the scale the remaining items loaded clearly on two factors as shown in Table A3, the Cronbach's alpha remained unchanged at 0.86 after the omission of this item. Factor 1 refers to idea promotion and idea implementation (innovation), and factor 2 refers to idea generation (creativity). The Cronbach's alphas of the two dimensions were 0.84 and 0.66 respectively. All 11 items were however included in the measurement of an overall IWB scale.

Table A3: Factor analysis of IWB items

	Factors	
	1	**2**
Introducing innovative ideas into the work environment in a systematic way	.806	
Transforming ideas into useful applications	.805	
Evaluating the utility of innovative ideas	.770	
Making important school members enthusiastic for innovative ideas	.708	
Mobilizing support for innovative ideas	.659	
Acquiring approval for innovative ideas	.591	
wondering about how things can be improved	.407	

Searching out new working methods, techniques or instruments		.769
Creating original solutions for problems		.747
Creating new ideas for difficult solutions		.667
Variance explained (%)	35	19
Extraction Method: Principal Component Analysis. **Rotation Method**: Varimax with Kaiser Normalization.		

Social Desirability: Social desirability was included as a control and common method marker variable. Two items adapted from the scale developed by Crowne and Marlowe (1960) were used to measure this construct. The Cronbach's alpha of the scale was moderate at 0.60.

The summary of the measures and their reliabilities is shown in Table A4.

Table A4: Summary of measurement of variables

Variable	**# of items used**	**Items deleted**	**Cronbach's alpha**
Transformational leadership	8	0	0.89
Contingent-reward leadership	2	0	0.61
Active constructive leadership	**10**	**0**	**0.90**
Organizational Justice	**4**	**2**	**0.72**
Procedural justice	2	0	0.60
Interactional Justice	2	0	0.78
Organizational commitment	**4**	**1**	**0.89**
Organizational commitment	5	0	0.77
OCB	**8**	**2**	**0.61**

IWB	**11**	**0**	**0.86**
Social desirability	2	0	0.60

Open ended question: An inductive approach was used to gather and analyse OCB descriptions from participants. Out of 95 participants in sample 1, 62 (65%) generated 162 items, but after removing work incidents that were not behavioural or were ambiguous in nature, only 102 items remained (1.65 per respondent in this question). A 3-person screening panel (the present author and two other researchers – a PhD student in information systems and a lecturer in HRM) classified the items into OCB categories based on similarity of item content. The panel members independently categorised, agreed on, and coded OCBs collected through qualitative approaches as none, OCB-I, OCB-O and both OCB-I and OCB-O as indicated in the general methodology. There was an agreement of 90 per cent in the categorisation of OCB descriptions, and after collaborative deliberations, the panel agreed on appropriate coding of all OCB descriptions.

2.2. Results – sample 1

This sub-section presents the results of sample 1, and their discussion will be made together with those of samples 2 and 3 in the conclusion sub-section.

The means and zero-order correlations of the main variables are shown in Table A5.

Table A5: Correlation of the main variables

Variable	**Mean**	1	2	3	4	5	6	7	8
1. ACL	2.29	(0.90)							
2. TFL	2.26	0.99**	(0.89)						

3. CRL	2.49	0.81**	0.69**	(0.61)					
4. OJ	3.34	0.69**	0.70**	0.52**	(0.72)				
5. OC	3.89	0.57**	0.54**	0.47**	0.52**	(0.89)			
6. OCB	4.00	0.08	0.09	0.08	0.30**	0.24*	(0.61)		
7. IWB	3.01	0.24*	0.21^{+}	0.31**	0.25*	0.17	0.38**	(0.86)	
8. SD	4.01	0.14	0.17	0.07	0.34**	0.15	0.34**	0.44*	(0.60)

Notes: $^{+}$ correlation is significant at 0.10; *correlation is significant at 0.05; **Correlation is significant at 0.01. ACL=Active constructive leadership; TFL=Transformational leadership; CRL=Contingent-reward leadership; OJ=Organizational Justice; OC=Organizational commitment; OCB=Organizational citizenship behaviour, IWB=Innovative work behaviour; SD=Social desirability. Internal reliabilities are shown in parentheses on a diagonal.

While the items tapping into the *active constructive leadership* (α = 0.90), transformational leadership (α = 0.89), organizational justice (α = 0.71), and IWB (α = 0.86) constructs had good internal reliabilities, those tapping into contingent-reward leadership (α = 0.61), OCB (α = 0.61), and social desirability (α = 0.60) constructs only had moderate reliabilities (Nunnally, 1978).

The results suggest that organisational commitment correlated significantly with OCB ($r = 0.24$, $p \leq 0.05$), but not IWB ($r = 0.17$, $p \geq 0.05$). This implies that high organisational commitment of teachers was associated with their affiliative extra-role behaviours (OCB) and vice versa; but not with their creative and innovative performance.

Active constructive leadership and contingent-reward leadership correlated moderately with innovative work behaviour ($r = 0.24$, $p \leq 0.05$, 0.31, $p \leq 0.01$ respectively), but the relationship between transformational leadership and IWB was not significant ($r = 0.21$, $p \leq 0.1$). This provides support that the perception of effective leadership behaviour of principals, especially contingent-reward leadership, motivated teachers to engage in IWBs. All forms of leadership (active

constructive leadership, transformational leadership and contingent-reward leadership) were surprisingly not related to OCB ($r = 0.08$, $p \geq 0.05$, $r = 0.09$, $p \geq 0.05$, and $r = 0.08$, $p \geq 0.05$ respectively).

Organisational justice correlated positively and significantly with both OCB ($r=0.30$, $p\leq0.01$) and IWB ($r=0.25$, $p\leq0.05$), implying that the perception of fairness in schools prompted teachers to go beyond the call of duty, and to be creative and innovative in teaching.

All correlations show that all forms of leadership (active constructive leadership, transformational leadership and contingent-reward leadership) were positively and strongly related to organizational commitment ($r=0.57$, $p\leq0.01$, $r=0.54$, $p\leq0.01$, and $r=0.47$, $p\leq0.01$ respectively) and organisational justice ($r=0.69$, $p\leq0.01$, $r=0.70$, $p\leq0.01$, and $r=0.52$, $p\leq0.01$ respectively). This implies that the higher the perception of quality leadership, the higher the commitment of teachers and their perception of fairness, and vice versa.

Organizational justice was positively and strongly related to organizational commitment ($r=0.52$, $p\leq0.01$), implying that the teachers who perceived higher organizational justice were more likely than those who perceived low fairness to be committed to their schools.

The correlation between OCB and IWB was moderate ($r=0.38$, $p\leq0.01$), suggesting that these extra-role behaviours were related but distinct from each other.

In sum, with the exception of the leadership - OCB relationship and organisational commitment - IWB relationship, most zero-order correlations were positive and significant as expected.

As shown in Table A6, albeit in slightly lower figures, correlations remained significant even after partialling out the social desirability variable.

Table A6: Partial correlations of the main variables (Control variable: Social desirability)

Variable	**Mean**	1	2	3	4	5	6	7
1. ACL	2.29	(0.90)						
2. TFL	2.26	0.98**	(0.89)					
3. CRL	2.49	0.80**	0.68**	(0.61)				
4. OJ	3.34	0.66**	0.67**	0.49**	(0.72)			
5. OC	3.89	0.53**	0.49**	0.44**	0.46**	(0.89)		
6. OCB	4.00	0.05	0.05	0.06	0.26**	0.23*	(0.61)	
7. IWB	3.01	0.24*	0.19^{+}	0.33**	0.20*	0.13	0.29*	(0.86)

Notes: $^{+}$ correlation is significant at 0.10; *correlation is significant at 0.05; **Correlation is significant at 0.01. ACL=Active constructive leadership; TFL=Transformational leadership; CRL=Contingent-reward leadership; OJ=Organizational Justice; OC=Organizational commitment; OCB=Organizational citizenship behaviour, IWB=Innovative work behaviour. Internal reliabilities are shown in parentheses on a diagonal.

Supplementary analyses

I conducted supplementary analyses to tease out the relationships among various variables (dimensions) of the sample.

The partial correlations revealed that all forms of leadership (active constructive, transformation, and contingent-reward) correlated

significantly with innovation (r=0.30, p≤0.01, r=0.25, p≤0.05, and r=0.41, p≤0.01 respectively), but not creativity (r=0.03, p≥0.05, r=0.01, p≥0.05, and r=0.10, p≥0.05 respectively). Similarly, organisational justice correlated significantly with innovation (r=0.24, p≤0.01), but not creativity (r=0.10, p≥0.05). OCB related to both creativity (r=0.25, p≤0.01) and innovation (r=0.29, p≤0.01), but with the latter correlation slightly higher.

Could it be that, in line with my proposition in the literature review, these social contextual support factors have more pronounced correlation with innovation, while having subdued correlation with creativity?

I used ANOVA tests to examine if there were significant differences between coded OCB grouped data and the main variables of the study, and I found that only transactional leadership ($F(3, 89) = 3.63$, $p \leq 0.05$), commitment ($F(3, 86) = 3.41$, $p \leq 0.05$), and IWB ($F(3, 82) = 4.25$, $p \leq 0.05$) produced significant F statistics. Interestingly, once I disaggregated IWB into its components, creativity did not produce a significant F ($F(3, 89) = 1.26$, $p \geq 0.05$), but innovation did ($F(3, 86) = 3.28$, $p \leq 0.05$). This implies that even differences in qualitatively coded OCB categories influenced teacher innovation, but not creativity.

The correlation between organisational commitment and OCB-I was not significant, but organisational commitment could not be related to OCB-O in this sample because of the low internal reliability of the scale of the latter. This result may be due to the fact that organisational commitment correlates more with OCB-O than OCB-I as the former two variables are conceptualised at the same level of analysis - organisation (Khaola & Sebotsa, 2015).

Even though the sample size was arguably small to conduct comprehensive regression analysis, it is worth mentioning that when OCB was regressed simultaneously on organisational commitment and organisational justice, the impact of organisational commitment became insignificant (β =0.13, $p \geq 0.05$), and that of organisational justice remained significant (β =0.26, $p \leq 0.05$).

Even though the scale used in sample 1 to measure OCB has been used before to measure this construct among teachers (e.g. Mahembe & Engelbert, 2014 in South African schools), it may be argued that the scale designed specifically to tap into OCB of teachers was not used. As suggested by Dipaola and Tschnnen-Moran (2001), a specific scale may be required to measure OCB in schools. Sample 2 adopted the scale designed specifically to tap into OCB of teachers to examine if the relationships established in sample one can be replicated (Dipaola & Tschnnen-Moran, 2001).

3. Sample 2

The same conceptual variables examined in sample 1 were evaluated in a sample of high school teachers. 100 questionnaires were distributed to a convenient sample of all teachers in 8 schools (6 located within Maseru, and 2 located in Roma outside Maseru). Out of 100 questionnaires distributed, 54 questionnaires (54%) were returned (about 7 teachers per school). Of the respondent sample, Seventy-six per cent were females, and twenty-four per cent were males. Sixteen per cent of the respondents were in the age group 20 to 30; forty-four per cent were in the age group 31 to 40; twenty-six per cent were in the age group 41 to 50; and fourteen per cent were above 50 years of age. The participants had an average tenure of 11.53 years (range 1-30 years; SD=8.56). With the exception of

response rate, the features of sample 2 were close to those of sample 1.

3.1. Measures – Sample 2

With the exceptions discussed next, all measures used in sample 1 were repeated in sample 2.

Ten items from the scale developed by Dipaola and Tschnnen-Moran (2001) were specifically used to measure OCB of teachers (see appendix 2b). Two more items from the scale developed by Borman and Motowidlo (1993) were also added to the scale to measure OCB. The item 'I consider my work load quite fair' used to measure distributive justice was replaced with the item 'overall, the rewards I receive here are quite fair'. Similarly, the item 'I am willing to put myself out to help my school' used in sample 1 to measure organisational commitment was replaced with the item 'I feel like part of the family at this school'. Finally, of the 11 items used to measure IWB in sample 1, the item 'creating new ideas for difficult issues' was omitted from the IWB scale. All other items used in sample 1 were retained in sample 2.

As was the case in sample 1, open ended questions on OCB were gathered, coded, and analysed qualitatively following similar processes and procedures.

3.2. Results – Sample 2

Partial correlations of variables and the internal reliabilities of scales used in sample 2 are shown in Table A7.

Table A7: Partial correlations of the main variables (Control = Social desirability, α =0.61)

Variable	Mean	1	2	3	4	5	6	7
1. ACL	2.61	(0.95)						
2. TFL	2.55	0.99**	(0.94)					
3. CRL	2.86	0.86**	0.79**	(0.86)				
4. OJ	2.99	0.80**	0.81**	0.61**	(0.88)			
5. OC	3.77	0.56**	0.55**	0.50**	0.54**	(0.94)		
6. OCB	3.75	0.55**	0.55**	0.47**	0.43**	0.31*	(0.82)	
7. IWB	2.81	0.48**	0.47**	0.43**	0.35*	0.11	0.44**	(0.92)

Notes: $^{+}$ correlation is significant at 0.10; *correlation is significant at 0.05; **Correlation is significant at 0.01. ACL=Active constructive leadership; TFL=Transformational leadership; CRL=Contingent-reward leadership; OJ=Organizational Justice; OC=Organizational commitment; OCB=Organizational citizenship behaviour, IWB=Innovative work behaviour. Internal reliabilities are shown in parentheses on a diagonal.

Table A7 shows high internal reliabilities of all scales, ranging from 0.82 to 0.95. Compared with those in sample 1, these internal reliabilities were generally slightly higher.

As was the case in sample 1, one factor emerged from factor analysis (principal components, varimax rotation) of leadership items in sample 2, suggesting that participants could not again differentiate between contingent-reward and transformational forms of leadership.

The results of sample 2 again confirm that organisational commitment was significantly related to teacher OCB ($r = 0.31$, $p \leq 0.05$), but not

IWB (r = 0.11, p≥0.05). This implies again that high organisational commitment was associated with teachers' affiliative OCB, and vice versa; but not with change-oriented/innovative behaviours. All forms of leadership (active constructive leadership, transformational leadership and contingent-reward leadership) correlated positively and significantly to IWB (r = 0.48, p ≤ 0.01, r = 0.47, p ≤ 0.01, and r = 0.43, p ≤ 0.01 respectively). This was slightly different from the results of sample 1 where transformational leadership did not correlate significantly with IWB. This again somewhat confirms that the perception of effective leadership behaviour of principals motivated this sample of teachers to engage in IWBs.

In contrast to the results of sample 1, results of sample 2 suggest that all forms of leadership (active constructive leadership, transformational leadership and contingent-reward leadership) were now positively and significantly related to OCB (r = 0.55, p ≤ 0.01, r = 0.55, p ≤ 0.01, and r = 0.47, p ≤ 0.01 respectively), implying that quality leadership was associated with high OCB, and vice versa.

Organisational justice again correlated positively and significantly with both OCB (r=0.43, p≤0.01) and IWB (r=0.35, p≤0.05) in sample 2, confirming that the perception of fairness in schools prompted teachers to go beyond the call of duty, and to perceive themselves to be creative and innovative in teaching.

As was the case in sample 1, all correlations in sample 2 show that all forms of leadership (active constructive leadership, transformational leadership and contingent-reward leadership) were positively and strongly related to organizational commitment (r=0.56, p≤0.01, r=0.55, p≤0.01, and r=0.50, p≤0.01 respectively) and organisational justice (r=0.80, p≤0.01, r=0.81, p≤0.01, and r=0.61, p≤0.01 respectively). This implies that the higher the perception of quality

leadership, the higher the commitment of teachers and their perception of fairness, and vice versa. The high correlation between leadership, especially transformational leadership and organisational justice ($r \geq 0.8$) suggests that in sample 2, teachers might have not correctly differentiated between the two concepts, probably explaining why leadership in sample 1 did not relate to OCB, but did so strongly in sample 2. It may be that in sample 2, leadership assumed the characteristics of organisational justice (or vice versa) as I discuss later.

Tracking the results of sample 1, organizational justice was positively and strongly related to organizational commitment ($r=0.54$, $p \leq 0.01$), implying that the teachers who perceived higher organizational justice were more likely than those who perceived low fairness to be committed to their schools.

Even though the correlation coefficient between OCB and IWB was slightly higher in sample 1 than in sample 2, it was still moderate ($r=0.44$, $p \leq 0.01$), suggesting that these extra-role behaviours were related but distinct from each other.

In terms of open-ended questions, 22 respondents wrote down 53 valid behavioural descriptions of OCB (about 2 behavioural incidents per respondent). As was the case in sample 1, the majority (74%) described OCB behaviour oriented towards others, and the rest (26%) described OCB behaviour oriented towards the organisation.

Supplementary analysis

As I did in sample 1, I again deconstructed IWB into creativity (Cronbach's $\alpha = 0.75$) and innovation (Cronbach's $\alpha = 0.88$), and correlated them with the main study variables. All forms of leadership and OCB correlated significantly with the two dimensions, but

organisational commitment was not related to any of the dimensions. Organisational justice only correlated significantly with innovation ($r=0.30$, $p\leq0.05$), but not with creativity ($r=0.28$, $p\geq0.05$).

Even though the number of cases was arguably small, I also used ANOVA test to examine if there were significant differences between the coded OCB categories and the main variables, and I found that the OCB categories produced an F value close to significance only in IWB ($F(3, 46), = 2.65$, $p=0.06$). Interestingly, although the categories produced a significant F value in innovation ($F(3, 44) = 2.79$, $p\leq0.05$), they did not result in significant F value in creativity ($F(3, 44) = 2.13$, $p\geq0.05$), implying again that the qualitatively coded OCB of teachers differed across teacher innovation, but not creativity.

In general, the internal reliabilities of scales and predictive validities of variables were almost similar in samples 1 and 2. It can however be argued that the above results were unique for academic employees (teachers), and could probably not hold among non-academic employees. Sample 3 was added to examine such possibility.

4. Sample 3

The progressively revised tools used in samples 1 and 2 were tested in a convenient sample of employees working in public and private sectors. The scales were changed slightly from those used for teachers to fit the environment of employees working in different industries (see final instrument in appendix 2).

The sample consisted of 32 and 15 employed part-time students pursuing the Postgraduate Diploma in Human Resources Management and Postgraduate Diploma in Labour Law (Conciliation & Arbitration); out of which 24 (75%) and 9 (60%) usable questionnaires were returned respectively. A further convenient sample of 80 employees

from 4 organisations in Maseru was recruited to help pilot the study, and 36 (45%) usable questionnaires were returned. In total, 69 usable questionnaires were available for analysis.

4.1. Measures – Sample 3

In terms of measures, the items and variables used in sample 2, with the exception of OCB, were used again. As shown in Table A8, the psychometric properties of the measures used in sample 3 were acceptable and almost similar to those of samples 1 and 2, with the exception of social desirability whose Cronbach's alpha in sample 3 was so small that the two items could not be added together.

In line with the scale used in sample 1, 10 items adapted from the scale developed by Podsakoff et al. (1990) were used to measure OCB. Two more items from the scale developed by Borman and Motowidlo (1993) were added to the scale to measure OCB. Note that in sample 2 the scale that was used is the one that some researchers argue is more appropriate to the measurement of OCB of teachers (e.g. Dipaola & Tschnnen-Moran, 2001), but in this study the main scale used is the general one proposed in sample 1. Two OCB scales were piloted to examine if the findings could materially differ based on the use of slightly different scales.

Interestingly, as was the case in sample 1 where the sample consisted of teachers, factor analysis of OCB items in this sample did not produce interpretable factors, but after the omission of four items (I try to avoid creating problems for co-workers, I take steps to prevent problems with co-workers, I am always punctual at work, and I do not take extra breaks from work), the Cronbach's alpha of the OCB scale was moderate at 0.66. Note that the first two variables were meant to measure courtesy (α=0.67), and the latter two variables were meant to measure conscientiousness (α=0.60) dimensions of OCB. The four

items omitted from the OCB scale did not correlate well in terms of Cronbach's alpha. After omitting two altruism items (α=0.60) from the OCB scale because they were theoretically meant to measure OCB-I along with courtesy items (α=0.67), the Cronbach's alpha (α) was 0.62 for OCB-O (not including conscientiousness dimension which was omitted). Courtesy and altruism were used as two separate measures of OCB-I; and OCB-O was represented by conscientiousness and OCB-O (without conscientiousness) because the items measuring these dimensions failed to correlate well in terms of Cronbach's alpha.

As was the case in samples 1 and 2, factor analysis of leadership produced one factor, but in contrast to both prior samples, factor analysis of organisational justice produced two factors, but with one distributive justice loading on both distributive justice and procedural justice factors. Similar ambiguity was observed with regard to IWB which produced two factors, but with 3 items meant to measure idea promotion loading on both idea generation and idea implementation factors. Cronbach's alphas for creativity (idea generation) was 0.86, and that for innovation (idea promotion and idea implementation) were 0.90.

Table A8: Summary of measurement of variables (Pilot sample 3)

Variable	**# of items used**	**Items deleted**	**Cronbach's alpha**
Transformational leadership	8	0	0.92
Contingent-reward leadership	2	0	0.67
Active constructive leadership	**10**	**0**	**0.93**

Organizational Justice	**6**	**0**	**0.77**
Procedural justice	4	0	0.83
Distributive justice	2	0	0.69
Organizational commitment	**5**	**0**	**0.87**
OCB	**12**	**4**	**0.66**
IWB	**11**	**0**	**0.86**
Social desirability	2	0	0.26

4.2. Results – Sample 3

Zero-order correlations for variables in sample 3 are shown in Table A9. Zero-order correlations were used in place of partial correlations because there was no need to partial out social desirability variable because none of its items correlated significantly with any variable in this sample.

Table A9: Zero-order correlations of the main variables (Pilot sample 3)

Variable	**Mean**	1	2	3	4	5	6	7
1. ACL		(0.93)						
2. TFL		0.99**	(0.92)					
3. CRL		0.86**	0.79**	(0.67)				
4. OJ		0.61**	0.62**	0.47**	(0.77)			
5. OC		0.38**	0.38**	0.32**	0.52**	(0.87)		
6. OCB		0.06	0.08	-0.04	0.19	0.33**	(0.66)	
7. IWB		0.19	0.20	0.10	0.14	0.04	0.35**	(0.91)

Notes: **Correlation is significant at 0.01. ACL=Active constructive leadership; TFL=Transformational leadership; CRL=Contingent-reward leadership; OJ=Organizational Justice; OC=Organizational commitment; OCB=Organizational citizenship behaviour, IWB=Innovative work behaviour. Internal reliabilities are shown in parentheses on a diagonal.

As was the case in samples 1 and 2, organisational commitment in sample 3 correlated significantly with employee OCB ($r = 0.33$, $p \leq 0.01$); but not with IWB ($r = 0.04$, $p \geq 0.05$). This intimates again that affective commitment might have influenced teachers to perform affiliative extra-role behaviour (OCB), but not change-oriented or innovative extra-role behaviours (IWB).

All forms of leadership (active constructive leadership, transformational leadership and contingent-reward leadership) failed to correlate significantly with IWB ($r = 0.19$, $p \geq 0.05$, $r = 0.20$, $p \geq 0.05$, and $r = 0.10$, $p \geq 0.05$ respectively). These findings are different from those obtained in samples 1 and 2, with the exception of the relationship between transformational leadership and IWB in sample 1 that was also found to be insignificant. In contrast to the results of sample 2, but in line with those of sample 1, results of sample 3 suggest that all forms of leadership (active constructive leadership, transformational leadership and contingent-reward leadership) were not at all related to OCB ($r = 0.06$, $p \geq 0.05$, $r = 0.08$, $p \geq 0.05$, and $r = -0.04$, $p \geq 0.05$ respectively).

Contrary to expectations and the results of samples 1 and 2, organisational justice failed to correlate significantly with either OCB ($r = 0.19$, $p \geq 0.05$) or IWB ($r = 0.14$, $p \geq 0.05$) in sample 3.

As was the case in samples 1 and 2, all correlations in sample 3 showed that all forms of leadership (active constructive leadership, transformational leadership and contingent-reward leadership) were positively and significantly related to organizational commitment ($r=0.38$, $p\leq0.01$, $r=0.38$, $p\leq0.01$, and $r=0.32$, $p\leq0.01$ respectively) and organisational justice ($r=0.61$, $p\leq0.01$, $r=0.62$, $p\leq0.01$, and $r=0.47$, $p\leq0.01$ respectively). This again implies that the higher the perception of quality leadership, the higher the commitment of employees and their perception of fairness, and vice versa.

Similarly, as was the case in samples 1 and 2, organizational justice was again positively and significantly related to organizational commitment ($r = 0.52$, $p \leq 0.01$), implying that employees who perceived higher organizational justice were more likely than those who perceived low fairness to be committed to their organisations. This relationship was higher for procedural justice ($r = 0.45$, $p \leq 0.01$) than for distributive justice ($r = 0.38$, $p \leq 0.01$).

The correlation between OCB and IWB was still moderate in sample 3 ($r = 0.35$, $p \leq 0.01$), suggesting that, as was the case in samples 1 and 2; these extra-role behaviours were related but distinct from each other.

Supplementary analysis

As I did in samples 1 and 2, I again deconstructed IWB into creativity and innovation and correlated them with the main variables. Both active constructive leadership and transformational leadership correlated significantly with innovation ($r = 0.26$, $p \leq 0.05$ and $r = 0.27$, $p \leq 0.05$ respectively); but not with creativity ($r = 0.11$, $p \geq 0.05$ and $r = 0.13$, $p \geq 0.05$ respectively). Contingent-reward leadership was not significantly related to any component of IWB.

Similar results were observed with regard to organisational justice and OCB which were both significantly related to innovation ($r = 0.26$, $p \leq 0.05$ and $r = 0.39$, $p \leq 0.01$ respectively); but not with creativity ($= -0.01$, $p \geq 0.05$ and $r = 0.20$, $p \geq 0.05$ respectively). Neither contingent-reward leadership nor organisational commitment was significantly related to any component of IWB.

The coded OCB dimensions did not result in a significant F value in any of the components of IWB, implying that there were no significant differences across the coded OCB groups in the components of IWB.

Interestingly, when organisational justice was disaggregated into distributive justice and procedural justice, only distributive justice correlated significantly with OCB ($r = 0.28$, $p \leq 0.05$), and disaggregating OCB into OCB-O and OCB-I, resulted in procedural justice correlating slightly with OCB-O (conscientiousness dimension) ($r = 0.24$, $p \leq 0.05$). Similarly, disaggregating IWB into its components (creativity and innovation) resulted in a slight but significant relationship between procedural justice and innovation ($r = 0.28$, $p \leq 0.05$).

5. Conclusion

The aim of this appendix was to pilot the instruments and approaches used to collect and analyse data for this thesis. In this subsection I present the summary of the emerging patterns and unexpected issues in all 3 pilot study samples.

For all the five variables introduced in Figure 2.1, the internal reliabilities of the scales used to collect data were reasonably high and consistent in the three varied samples used in this pilot study.

The exploratory factor analyses of the items of active constructive leadership (consisting of transformational leadership and contingent-

reward leadership) resulted in one factor in all three samples, with high internal reliabilities of 0.90, 0.95 and 0.93 in samples 1, 2 and 3 respectively. More or less similar trend emerged from preliminary examination of affective organisational commitment scale which had high internal reliabilities of 0.89, 0.94, and .87 in samples 1, 2 and 3 respectively.

For organisational justice scale, there was a general tendency of the items to load on two factors (distributive justice and procedural justice), but with satisfactory scale internal reliabilities of 0.72, 0.88, and 0.77 for samples 1, 2, and 3 respectively. With some varying degree of accuracy there was a general trend for IWB scale items to load on two factors (creativity and innovation) but with one valid summative scale of 0.86, 0.92, and 0.86 internal reliabilities for samples 1, 2 and 3 respectively.

The scale that was moderate and produced non-uniform factors was that of OCB. These inconsistent findings remained throughout the three varied samples used to pilot this thesis.

The preliminary correlation analyses were used to test the relationships of variables proposed in Figure 2.1.

As expected, organisational commitment was strongly related to OCB throughout the three piloted samples. This is not only consistent with prior studies (e.g. Khaola & Sebotsa, 2015; Organ, Podsakoff, & MacKenzie, 2006; Coyle-Shapiro, Kessler, & Purcell, 2004; Podsakoff *et al*., 2000), but also confirms that the affective commitment of employees to their organisations might influence this affiliative extra-role effort. The relationship between organisational commitment and IWB was however not significant in the three samples of the pilot study. While it may be too premature to rule out the impact of

affective organisational commitment on IWB, it has been argued before that traditional job attitudes such as organizational commitment or job satisfaction may be less relevant for change-oriented behaviours because employees may feel strong attachment to the status quo and hence fail to perceive opportunities for improvement (Marinova, Peng, Loringkova, Van Dyne, & Chiaburu, 2015). Clearly studies with larger sample sizes are required to confirm or to refute this consistent finding in the 3 samples. One other observation may be noted in relation to these consistent relationships between affective organisational commitment and two extra-role behaviours (OCB and IWB), namely that the two extra-role behaviours may have different predictors, which may reinforce the view that the two behaviours are related, but quite distinct from each other. In line with this view, the emerging evidence suggests that there is merit in exploring further the proposition that social and relational processes may have higher correlation with innovation, while having lower correlations with creativity.

Contrary to expectations, leadership produced inconsistent relationships with both OCB and IWB. While there were no associations between all forms of leadership and OCB in samples 1 and 3, all forms of leadership correlated significantly with OCB in sample 2. Because samples 1 and 2 consisted of teachers, and sample 3 consisted of other types of employees, this inconsistency cannot be attributed to the nature of the sample. Similarly, with the exception of transformational leadership in sample 1, all forms of leadership correlated positively and significantly with IWB in samples 1 and 2, but there was no relationship between these concepts in sample 3. This inconsistency is not new in the literature (Basu & Green, 1997; Mumford & Licuanan, 2004; Pieterse, van Knippenberg, Schippers &

Stam, 2010; Podsakoff *et al.* 1990; Vigota-Dagot & Beeri, 2011). For instance, the oft-quoted study by Podsakoff *et al.* (1990) also found the indirect relationship between leadership and OCB, and Mumford and Licuanan (2004) claim that transformational leadership has no effect on idea generation (creativity). More research is needed to delineate the sources of these inconsistencies. One such avenue for leadership research involves including the variables that may mediate or moderate the relationship between leadership and these extra-role behaviours (Mumford & Licuanan, 2004).

As expected, organisational justice was positively and significantly related to organisational commitment in samples 1, 2 and 3. This is not surprising given that the common denominator between these two attitudes is what Organ and colleagues (2006) call an 'm'-factor (i.e. morale reflecting affective commitment; fairness; job satisfaction and leader consideration). Based on this same logic, I found that organisational justice was consistently and strongly correlated with leadership in all samples. What needs to be confirmed further is whether or not the impact of commitment on extra-role behaviours becomes insignificant when organisational justice is controlled for. According to Moorman, Niehoff and Organ (1993), the relationship between attitudes such as job satisfaction and organisational commitment may reflect large components of fairness, and this in their view, puts in doubt the consistent relationships between these attitudes and OCBs.

In sum, the results of samples 1, 2 and 3 showed reasonable psychometric properties of the measures used. These provide indication that the tools and approaches used and refined in the pilot studies can be used again to collect reliable and valid data for the primary study.

APPENDIX 2

INSTRUMENT AND ETHICS CLEARANCE

a) Participant information sheet and the questionnaire for the main study

Participant information sheet

Dear Potential Respondent,

My name is Phomane Peter Khaola, a PhD student at the University of Witwatersrand. I am conducting research on factors that influence extra-role behaviours in organisations. Extra-role behaviours refer to useful job behaviours that are not described in employee job descriptions, and they are important for organizational competitiveness.

As an employee in an organisation, I invite you to take part in this study.

The study is both anonymous and confidential. You are therefore asked not to write your name on the questionnaire (attached). The information you provide will be analysed collectively, and will in no way be identified with you as a person.

I value your participation, but note that in this study is optional, and you are free to withdraw from it at any stage without penalty or loss of benefits.

Section A of the questionnaire entails demographic data. Please fill in or tick whichever boxes are appropriate. Sections B, C and D entail 45 statements. Please tick the relevant number on the scale provided. The last section comprises an open-

ended question. Please describe job behaviours you perform, but that are not part of your job description in the space provided.

It is estimated that the questionnaire will take between 15 to 20 minutes to complete. The survey was approved by Wits University Research Ethics Committee (non-medical), protocol number H15/08/20. The National University of Lesotho has also endorsed the circulation of this questionnaire.

The results of the study will be published in the final thesis, and the copy will be available from Wits library, and the bound copy can be presented to your organisation on demand.

Should you have any questions, please contact me or my supervisor on the contact details given below.

Contact details: Phomane Peter Khaola (Researcher) +266-58043421, peterkhaola@gmail.com

Professor David Coldwell (Supervisor), David.Coldwell@wits.ac.za

By filling the questionnaire it will be assumed that you have read this information, and that you give consent for the information you provide to be used as explained.

Questionnaire

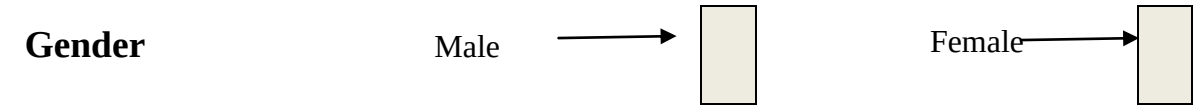
A. SECTION A: Demographic Data

In this section, kindly fill in information relating to you. (Please fill or tick whichever boxes are appropriate).

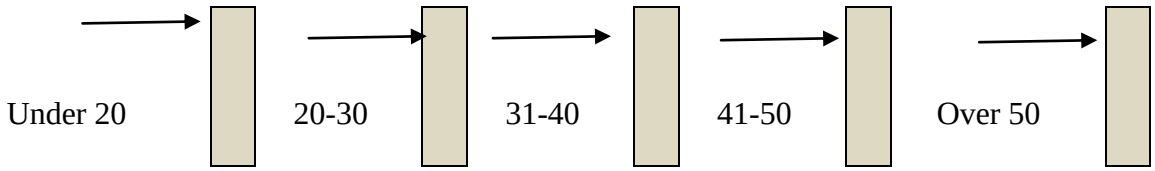
Company/organisation Name	

Number of years of employment in the current organisation	

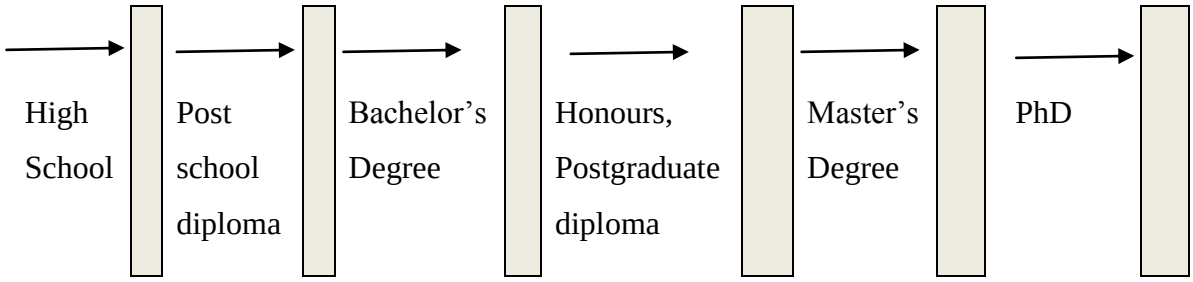
Gender



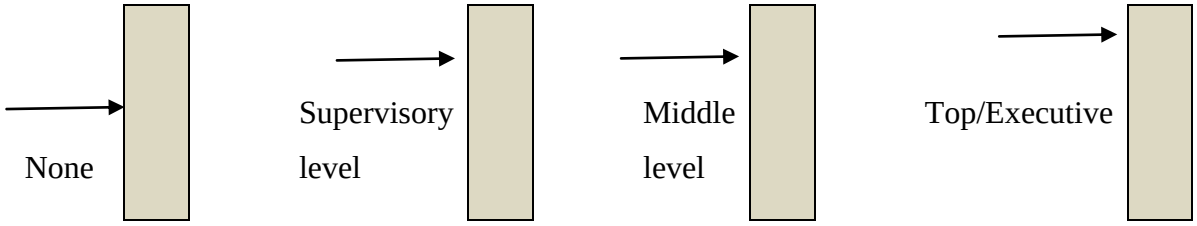
Age (in years)



Highest level of education (certificate)



Management Level



B. Section B. In this section kindly describe your immediate supervisor.

On a scale ranging from 0 to 4, rate how the statement below describes your immediate supervisor. 0=not all, 1=once in a while; 2=sometimes; 3=fairly often; 4=frequently, if not always. (Please tick the relevant number).

Statement	Not at all	⟷			Frequently if not always
1. My supervisor encourages me to look at problems from different angles	0	1	2	3	4
2. My supervisor stimulates me to think about old problems in new ways	0	1	2	3	4
3. My supervisor considers me as having different needs, abilities and aspirations from other employees	0	1	2	3	4
4. My supervisor helps me develop my strengths	0	1	2	3	4
5. My supervisor paints an interesting picture about the future	0	1	2	3	4
6. My supervisor articulates a compelling vision for the future	0	1	2	3	4
7. My supervisor instils pride in me for being associated with him/her	0	1	2	3	4
8. My supervisor acts in ways that build my					

respect	0	1	2	3	4
9. My supervisor indicates clearly what needs to be achieved	0	1	2	3	4
10. My supervisor makes it clear what one can expect to receive when performance goals are achieved	0	1	2	3	4

C. **SECTION C.** This section relates to your job, organisation and colleagues.

On as scale ranging from 1 to 5, rate the extent to which you agree with the statements below. 1=strongly disagree (SD); 2=disagree (D); 3=neutral (N); 4=agree (A); 5= strongly agree (SA). (Please tick the relevant number)

Statement	SD	D	N	A	SA
1. I think that my level of pay is fair	1	2	3	4	5
2. Overall, the rewards I receive here are quite fair	1	2	3	4	5
3. To make job decisions, my supervisor collects accurate and complete information	1	2	3	4	5
4. All job decisions are applied consistently across all affected employees	1	2	3	4	5
5. When decisions are made, my supervisor treats me with respect and dignity	1	2	3	4	5

6. When making decisions about my job, my supervisor offers explanations that make sense to me	1	2	3	4	5
7. I am quite proud to tell people who I work for	1	2	3	4	5
8. I feel a strong sense of belonging to my organisation	1	2	3	4	5
9. I am quite proud to be part of my organisation	1	2	3	4	5
10. I can recommend a close friend to work for my organisation	1	2	3	4	5
11. I feel like 'part of the family' at my organisation	1	2	3	4	5
12. I volunteer to help others who have work-related problems	1	2	3	4	5
13. I volunteer to help others who have heavy workloads	1	2	3	4	5
14. I consume a lot of time complaining about trivial matters	1	2	3	4	5
15. I always find fault with what my organisation is doing	1	2	3	4	5
16. I attend and actively participate in	1	2	3	4	5

meetings regarding my organisation					
17. I keep abreast of changes in my organisation	1	2	3	4	5
18. I take steps to prevent problems with co-workers	1	2	3	4	5
19. I try to avoid creating problems for co-workers	1	2	3	4	5
20. I am always punctual at work	1	2	3	4	5
21. I do not take extra breaks from work	1	2	3	4	5
22. I volunteer for additional duties	1	2	3	4	5
23. I voluntarily do more than the job requires	1	2	3	4	5
24. I never hesitate to help someone in trouble, whatever it takes	1	2	3	4	5
25. I always practice what I preach.	1	2	3	4	5

D. SECTION D. This section relates to the frequency with which you perform certain duties in your organisation.

On a scale ranging from 0 to 4, rate how often you perform the duties described below. 0=never; 1=seldom; 2=occasionally; 3=regularly; 4=always. (Please tick the relevant number).

Statement	Never	⟷			Always
1. Creating new ideas for difficult issues	0	1	2	3	4
2. Searching out new working methods, techniques or instruments	0	1	2	3	4
3. Generating original solutions for problems	0	1	2	3	4
4. Mobilizing support for innovative ideas	0	1	2	3	4
5. Acquiring approval for innovative ideas	0	1	2	3	4
6. Making important organisation members enthusiastic for innovative ideas	0	1	2	3	4
7. Transforming innovative ideas into useful applications	0	1	2	3	4
8. Introducing innovative ideas into the work environment in a systematic way	0	1	2	3	4
9. Evaluating the utility of innovative ideas	0	1	2	3	4
10. Wondering about how things can be	0	1	2	3	4

improved in my organisation					

E. **SECTION E.** This is an open-ended section

Think of the instances (examples) of helpful job behaviours which you frequently perform, but that are neither specifically part of your job description nor rewarded in your organisation. Please give a brief description/list of such behaviours which you frequently perform.

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F. **SECTION F**. In this section write down factors that constrain you from effectively executing your job duties and responsibilities (if any).

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Thank you for your co-operation in completing this questionnaire.

b) OCB scale for teachers in pilot study sample 2

1. I take the initiative to introduce myself to substitute teachers and to assist them
2. I voluntarily help new teachers
3. I make innovative suggestions to improve the overall quality of my school
4. I volunteer to sponsor extracurricular activities
5. I begin classes promptly and use class time effectively
6. I volunteer to serve on new committees
7. I help students on my own time
8. I give colleagues advanced notice of changes in schedule or routine
9. I arrive at work and meetings on time
10. I do not take extra breaks from work
11. I volunteer for additional duties

Research Office

HUMAN RESEARCH ETHICS COMMITTEE (NON-MEDICAL)
R14/49 Khaola

CLEARANCE CERTIFICATE	**PROTOCOL NUMBER: H15/08/20**
PROJECT TITLE	The effects of leadership, fairness and employee commitment on extra-role behaviours in Lesotho
INVESTIGATOR(S)	Mr P Khaola
SCHOOL/DEPARTMENT	Economics and Business Sciences/
DATE CONSIDERED	21 August 2015
DECISION OF THE COMMITTEE	Approved unconditionally
EXPIRY DATE	06 September 2018

DATE 07 September 2015 **CHAIRPERSON** _____
(Professor J Knight)

cc: Supervisor : Professor D Coldwell

DECLARATION OF INVESTIGATOR(S)

To be completed in duplicate and **ONE COPY** returned to the Secretary at Room 10005, 10th Floor, Senate House, University.

I/We fully understand the conditions under which I am/we are authorized to carry out the abovementioned research and I/we guarantee to ensure compliance with these conditions. Should any departure to be contemplated from the research procedure as approved I/we undertake to resubmit the protocol to the Committee. **I agree to completion of a yearly progress report.**

_____ _____/_____/_____
Signature **Date**

PLEASE QUOTE THE PROTOCOL NUMBER ON ALL ENQUIRIES

APPENDIX 3

TUKEY POST-HOC MULTIPLE COMPARISONS OF OCB TYPES ON IWB

Sample	OCB engagement (I)	comparison OCB group (J)	Mean (M) Difference (I-J)	Std. Error	95% Confidence Interval		Cohen's d
					Lower Bound	Upper Bound	
Primary	OCBI (n=72, M=2.53, SD=0.80)	None (n=93, M=2.66, SD=0.82)	-0.13	0.12	-0.44	0.19	-0.16 Trivial
	OCBO (n=67, M=2.78, SD=0.75)	None (n=93, M=2.66, SD=0.82)	0.12	0.12	-0.21	0.44	0.15 Trivial
		OCBI (n=72, M=2.53, SD=0.80)	0.25	0.13	-0.10	0.59	0.32 Small
	OCBI & OCBO (n=31, M=2.82, SD=0.78)	None (n=93, M=2.66, SD=0.82)	0.16	0.16	-0.21	0.44	0.20 Small
		OCBI (n=72, M=2.53, SD=0.80)	0.29	0.17	-0.15	0.72	37 Small
		OCBO (n=67, M=2.78, SD=0.75)	0.04	0.17	-0.40	0.48	0.05 Trivial
Pilot 1	OCBI (n=23, M=2.97, SD=0.55)	None (n=39, M=2.80, SD=0.67)	0.16	0.15	-0.23	0.56	0.28 Small
	OCBO (n=15, M=3.15, SD=0.33)	None (n=39, M=2.80, SD=0.67)	0.35	0.18	-0.11	0.82	0.66 Medium
		OCBI (n=23, M=2.97, SD=0.55)	0.19	0.19	-0.31	0.69	0.40 Small
	OCBI & OCBO (n=18, M=3.35, SD=0.34)	None (n=39, M=2.80, SD=0.67)	0.55**	0.16	0.12	1.00	1.04 Large
		OCBI (n=23, M=2.97, SD=0.55)	0.39*	0.17	-0.08	0.85	**0.83 Large**
		OCBO (n=15, M=3.15, SD=0.33)	0.19	0.20	-0.33	0.73	0.60 Medium
Pilot 2	OCBI (n=13, M=2.78, SD=0.65)	None (n=29, M=2.90, SD=0.69)	-0.12	0.22	-0.70	0.48	-0.18 Trivial

	OCBO (n=5), M=1.98, SD=0.66)	None (n=29, M=2.90, SD=0.69)	-0.92*	0.32	-1.69	0.03	-**1.36 Large**
		OCBI (n=13, M=2.78, SD=0.65)	-0.86	0.35	-1.64	0.22	-**1.22 Large**
	OCBI & OCBO (n=3, M=3.30, SD=0.30)	None (n=29, M=2.90, SD=0.69)	0.40	0.40	-0.67	1.48	0.75 Medium
		OCBI (n=13, M=2.78, SD=0.65)	0.52	0.43	-0.62	1.65	**1.03 Large**
		OCBO (n=5), M=1.98, SD=0.66)	1.32**	0.24	-0.06	2.53	**2.57 Large**
Pilot 3	OCBI (n=20, M=2.47, SD=0.89)	None (n=21, M=2.76, SD=0.73)	-0.25	0.26	-0.90	0.40	-0.35 Small
	OCBO (n=18, M=2.74, SD=0.81)	None (n=21, M=2.76, SD=0.73)	0.02	0.25	-0.64	0.69	-0.03 Trivial
		OCBI (n=20, M=2.47, SD=0.89)	0.27	0.26	-0.04	0.95	0.32 Small
	OCBI & OCBO (n=10, M=3.07, SD=0.60)	None (n=21, M=2.76, SD=0.73)	0.35	0.30	-0.45	1.15	0.46 Small
		OCBI (n=20, M=2.47, SD=0.89)	0.60	0.30	-0.21	1.40	0.79 Medium
		OCBO (n=18, M=2.74, SD=0.81)	0.33	0.31	-0.49	1.14	0.46 Small

Notes: *The mean difference is significant at the 0.1 level; ** The mean difference is significant at the 0.05 level; *** The mean difference is significant at the 0.01 level. M = Mean; SD = standard deviation. The computed figures have been rounded to 2 decimal places.