# THE MEDIATING EFFECT OF PSYCHOLOGICAL OWNERSHIP ON THE RELATIONSHIP BETWEEN SERVANT LEADERSHIP AND ORGANIZATIONAL CITIZENSHIP BEHAVIORS IN KANO, NIGERIA

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# ABSTRACT

This study examines the determinants of employee organizational citizenship behaviors (OCBs) among low and middle level employees of utility sector organizations in Nigeria. Primarily, this study explored the role of psychological ownership (PO) as a mediator on the relationship between servant leader behaviors (SLBs) including emotional healing, creating value for the community, conceptual skills and helping subordinates grow and succeed, and employee OCBs. Partial Least Squares Method (PLS) algorithm and bootstrap techniques were used to test the study hypotheses. The results provided support for most of the hypothesized relationship for the study. Specifically, emotional healing, conceptual skills, helping subordinates grow and succeed, putting subordinates first, and psychological ownership are significantly and positively related to both organizational citizenship behaviors that benefit the individual (OCB-I), and the organization (OCB-O). However, creating value for the community is significantly and negatively related to both forms of organizational citizenship behaviors. Additionally, emotional healing, helping subordinates grow and succeed, and putting subordinates first were significantly and positively related to psychological ownership, while creating value for the community was significantly and negatively related to psychological ownership. Furthermore, the results of mediation indicated that six of the ten hypotheses are significant. Therefore, significant positive effects of emotional healing, conceptual skills, helping subordinates grow and succeed, and putting subordinates first and psychological ownership suggest that the variables are important in motivating OCBs. As such, employees should be encouraged to exhibit these behaviors for enhanced performance of organizational citizenship behaviors. Enhanced performance of organizational citizenship behaviors can improve the overall effective function of organizations. Contributions, limitations, and implications are discussed.


**Keywords:** servant leadership, psychological ownership, organizational citizenship behaviors

# ABSTRAK

Kajian ini meneliti penentu gelagat kerakyatan pekerja organisasi (*organizational cilitizenship behaviour*) (OCB) di kalangan pekerja bawahan dan pekerja pertengahan organisasi di sektor utiliti di Nigeria. Kajian ini, khususnya, meneroka peranan pemilikan psikologi (PO) sebagai penyederhana dalam hubungan antara gelagat pemimpin yang berkhidmat untuk rakyat (*servant leader*) (SLB) termasuklah penyembuhan emosi, pembentukan nilai untuk masyarakat, kemahiran konsep, dan membantu orang bawahan untuk berkembang dan berjaya dengan gelagat kerakyatan pekerja organisasi. Algoritma *Partial Least Squares Method* (PLS) dan teknik *Bootstrap* digunakan untuk menguji hipotesis kajian. Dapatan menyokong kebanyakan hubungan yang dihipotesiskan. Secara khususnya, penyembuhan emosi, kemahiran konsep, membantu orang bawahan berkembang dan berjaya, mengutamakan orang bawahan, dan pemilikan psikologi berkait secara signifikan dan positif dengan gelagat kerakyatan organisasi yang menguntungkan individu (OCB-I) dan organisasi (OCB-O). Walau bagaimanapun, pembentukan nilai untuk masyarakat berkait secara signifikan dan negatif dengan kedua-dua jenis gelagat kerakyatan organisasi. Selain itu, penyembuhan emosi, membantu orang bawahan berkembang dan berjaya, dan mengutamakan orang bawahan berkait secara signifikan dan positif dengan pemilikan psikologi. Pembentukan nilai untuk masyarakat pula berkait secara signifikan dan negatif dengan pemilikan psikologi. Tambahan lagi, keputusan penyederhanaan memperlihatkan bahawa enam daripada sepuluh hipotesis adalah signifikan. Oleh itu, kesan positif lagi signifikan penyembuhan emosi, kemahiran konsep, membantu orang bawahan berkembang dan berjaya, dan mengutamakan orang bawahan, serta pemilikan psikologi merupakan pemboleh ubah yang penting dalam merangsang OCB. Ini bermakna pekerja perlu digalakkan untuk mempamerkan gelagat-gelagat ini bagi tujuan meningkatkan gelagat kerakyatan organisasi. Peningkatan gelagat kerakyatan organisasi dapat menambah baik keberkesanan seluruh organisasi. Sumbangan, batasan, dan implikasi kajian turut dibincangkan.

**Kata kunci:** kepemimpinan orang yang berkhidmat untuk rakyat, pemilikan psikologi, gelagat kerakyatan organisasi

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# TABLE OF CONTENTS

xiv

# LIST OF TABLES

# LIST OF FIGURES

# LIST OF ABBREVIATIONS

AMOS        Analysis of Moment Structures

CFA         Confirmatory Factor Analysis

CMV         Common Method Variance

CP          Contextual Performance

ERB         Extra-role Behaviour

GoF         Goodness of Fit

KSWB        Kano State Water Board

NITEL       Nigeria Telecommunications

OCB         Organizational Citizenship Behaviour

OCB-I       Organizational Citizenship Behaviour Benefiting the Individuals

OCB-O       Organizational Citizenship Behaviour Benefiting the Organization

OS          Organizational Spontaneity

OYAGSB      Othman Yeop Abdullah Graduate School of Business

PO          Psychological Ownership

PSB         Pro-social Behaviour

PSF         Putting Subordinates First

SEM         Structural Equation Modelling

SET         Social Exchange Theory

SLB         Servant Leader Behaviour

SL          Servant Leadership

SLT         Social Learning Theory

SPSS        Software Package for Statistical Analysis

PCA         Principal Component Analysis

PHCN        Power Holding Company of Nigeria

PLC         Public Liability Company

PLS         Partial Least Squares

UUM         Universiti Utara Malaysia

VAF         Variance Accounted For

## CHAPTER ONE

## INTRODUCTION

### 1.1    Background of the Study

One of the most important areas of concern among organizational theorists and practitioners is organizational effectiveness. A good mechanism for achieving it is through employees' willingness to perform their duties beyond the formal specifications of job roles, termed extra-role or discretionary behaviors (Organ, 1990). Increasing number of research on employee's discretionary work behaviors signifies the importance of this construct for the success of organizations. Multiple conceptualizations of discretionary employee work behaviors exist in the literature (e.g., pro-social organizational behaviour, extra role behaviour, contextual performance, and organizational citizenship behaviour [OCB]). Organ's (1988) conceptualization of OCB has received major research attention compared to other conceptualizations of discretionary employee behaviors (Van Dyne, Cummings, & Parks, 1995).

Organizational citizenship behaviors (OCBs) are behaviors that are not mandatory on the employees to carry out, but are helpful to the organization's effectiveness and goal attainment (Organ, 1988). In his words, Organ (1988, p. 4) defines organizational citizenship behaviour (OCB) as "behaviour that is discretionary, not directly or explicitly recognized by the formal reward system, and in the aggregate promotes the efficient functioning of the organization". Organizational citizenship behaviors are usually performed by employees to support the interests of the organization even though they may not directly lead to employee

1

benefits (Moorman & Blakely, 1995). However, Organ (1988) acknowledges that OCB could have a beneficial cumulative effect for an individual employee and that the employee might be considering the long-term benefits.

Employee OCB also benefits organizations directly or indirectly. Direct organizational benefits include volunteerism, assistance between co-workers, and unusual employee attendance to an important meeting, employee's punctuality and active participation in organizational affairs (Farh, Podsakoff, & Organ, 1990). Indirect benefits, as Smith, Organ, and Near (1983) stress, include lubricating the social machinery of the organization. Also Katz (1964) considered such discretionary behaviour essential for strong organizational social systems. He posited that the organization gains a measure of systemic resiliency from the small, spontaneous acts of selfless sensitivity, cooperation, and uncompensated contribution.

Employees exhibit OCBs in various situations. They exhibit OCBs when they help fellow workers who have difficulty in performing their work; when they exhibit endurance and perseverance in performing their jobs; when they avoid doing things or saying things that tarnish the image of their organization; when they spend extra time to achieve objectives; when they perform their job beyond requirements; or generally when they show extra concern about success of their organizations (Organ, 1988). From these scenarios it is clear that OCB could contribute to organizational performance in many ways. Podsakoff, Ahearne, and MacKenzie (1997) argue that OCB has potential to enhance organizational performance through lubricating the social machinery of the organization, reducing friction, and increasing efficiency. OCB may also contribute to organizational success by

enhancing co-worker and managerial productivity, promoting better use of scarce resources, improving coordination, strengthening the organization's ability to attract and retain better employees, reducing variability of performance, and enabling better adaptation to environmental changes (Podsakoff, Mackenzie, Paine, & Bachrach, 2000). Research demonstrates that OCB can be an important resource to improve organizational performance in complex work environments demanding team oriented work practices (Organ, Podsakoff, & MacKenzie, 2006).

In any part of this globe, economic development and social welfare are the ultimate goals of any credible and legitimate government (Ali, Ali, & Raza, 2011), and therefore, governments are charged with the responsibility of managing the public resources to ensure social welfare, or generate maximum public good through their established institutions (public utilities). Utility entails all basic inputs required for the proper functioning of the economy and enhancing the standard of living of the individuals (Ariyo & Jerome, 2004). Utility services involve a broad range of activities including water, electricity, transportation and telecommunication. Generally, these services impact greatly on a country's living standards, and overall economic growth. Specifically, they affect capacities of the local industries to produce quality and affordable products that can compete favourably in the global marketplace. It has been reported that the public utility sectors account for 7.1% to 11% of the GDP (World Bank, 1994), and the impacts of such services on human development and enhanced quality of life are just apparently enormous (Ariyo & Jerome, 2004).

However, the Nigerian public utilities have been performing abysmally largely due to employee performance related problems. The problem of poor

performance among agencies of public utility sector has been a subject of considerable discussion (Jerome, 1999). Despite heavy investment in capital infrastructures, and high recurrent expenditures, efficient and effective provision of electricity, telephone, water, and transport services has remained a heinous task to achieve. The Nigerian public utilities have started to experience decreasing performance since the Nigeria's oil boom years of the 1970s (Ariyo & Jerome, 2004). In more recent times, the problems in the public utility sectors have unfortunately reached crisis proportions when the Nigeria's electricity power system almost collapsed by increasingly becoming erratic; water taps continuously remaining dry for most of the time; and the performance of telecommunication and postal services continuously remaining to be very unsatisfactory (Ariyo & Jerome, 2004). The experienced problem of the utility sector has led to negative consequences on the Nigerian economy causing extremely high costs of operations within the real sector, and lowering quality of life and well-being of the average Nigerians (Ariyo & Jerome, 2004). The Nigerian public could no longer get services expeditiously from public sector organizations (Orabuchi, 2005).

In a survey of ten public corporations in Nigeria, Echu (2008) identified some striking problems that indirectly affect employee willingness to perform beyond the contractual agreement (OCB) and employee performance generally, and consequently leading to overall performance problems of public corporations including public utilities in Nigeria. These striking problems include massive fraud, misappropriation of resources, embezzlement and poor accountability. Other striking management related problems affecting employee OCB and performance include the nature of human resource practices in virtually all the public corporations. As a

result of some of these problems, employees become highly disenchanted and, therefore, have lost trust and confidence on management of their corporations consequently leading to large scale dissatisfaction among employees. As repercussions, and reflections of the employees' dissatisfaction, it has currently become a common practice for employees of Nigeria's public organizations to spend most part of their working hours doing things that are not job related and of no value to their jobs (Echu, 2008). Other commonly noticed employee performance related problems include late coming to work, absenteeism, indiscipline, high labour turnover and general lack of commitment, thus, indicating low performance of employees' voluntary behaviours (OCB).

The bulk of the performance problems and deficiencies of the Nigerian public sector could more appropriately be attributed to managerial inefficiencies, and inappropriate leadership approaches. Previous studies have found that the current management capabilities to imbibe the culture of commitment, sacrifice, citizenship, discipline, and general motivation among their subordinates are grossly inadequate to solve performance challenges of various Nigerian organizations especially the public utilities (Echu, 2008). Specifically and summarily, there is a general consensus that the managements of Nigeria's public corporations are by and large inefficient and ineffective (Adamolekun & Ayeni, 1990; Dogarawa, 2011; Esu & Inyang, 2009; Okeola & Salami, 2012). Ability of management of public utility sector to effectively motivate and sustain positive employee performance might be the most difficult challenge and crucial responsibility to put the public utility sector in order. However, success in achieving sustained positive employee performance for effective functioning of Nigerian public utilities is increasingly becoming an

eluding challenge considering the diverse workforce with multi-cultural, religious, ethnic, and sectional backgrounds (Adamolekun & Ayeni, 1990; Echu, 2008).

In 2000, the intractable performance problem faced by public corporations in Nigeria led to government's decision to think of initial commercialization, and final privatization of the government owned corporations. Till date, none among the Nigeria's public utilities has gone beyond full commercialization. However, official arrangements for execution of partial privatization programme for the electric, and telecommunication sectors have almost been concluded with a view to desired performance, sanity and efficiency. Although process and structural hiccups to performance can be solved by implementing structural process improvements, or business transformation, stimulating employees to perform at their highest level, as well as sustaining performance improvement still remains a fundamental issue. Indeed, several transformation programs may fail to deliver expected results if the basic factors, including inculcating the art of servant leadership within the organization, and development of psychological ownership for the organization among employees, that can trigger employees' motivation to perform beyond their normal call of duty (OCB) remain neglected.

Servant leadership is a leadership style where a leader places interests of followers' over and above his/her own interests (Joseph & Winston, 2005). Servant leadership is motivating to followers/subordinates because it focuses on followers' development, community building, authentic leadership, and shared leadership (Laub, 2003; Sendjaya, Sarros, & Santora, 2008). The best indicator of servant leadership is that followers are more likely to become servants themselves. On the other hand, psychological ownership for the organization is a state of mind in which

an employee develops possessive feelings for the organization (Dirks, Cummings, & Pierce, 1996). Psychological ownership for the organization is found to be significantly related to positive employee outcomes especially organizational citizenship behaviors (Van Dyne & Pierce, 2004; VandeWalle, Van Dyne & Kostova, 1995).

The present study is about exploring the impact of servant leadership on employee OCBs through the mechanism of psychological ownership. Performance of organizational citizenship behaviors by employees can be an important panacea for improving performance and effectiveness in the Nigeria's ailing public utility sector organizations. Literature has offered support to the role of OCB in improving effective functioning of organizations (Organ *et al*., 1988, 2006). Research has also indicated that OCB and counterproductive work behaviors are significantly negatively correlated (Baker, 2005), which means that a person high on OCB scale will not likely exhibit signs of deviant behaviour that can have negative effect on production, service delivery and industrial harmony. The ailing or rather ineffective public utility sector organizations, specifically Power Company (PHCN), Telecommunications Company (NITEL) and Water Board (KSWB) are expected to improve their OCB performance when their organizations practice the concept of servant leadership and motivate development of psychological ownership among their employees.

## 1.2     Problem Statement

Organizational citizenship behaviour (OCB) as one of the extra-role behaviors has been receiving a great deal of research (Lo & Ramayah, 2009; DiPaola & Mendes

7

da Costa Neves, 2009; Paillé, 2009; Khan, Afzal, & Zia, 2010), and successful organizations encourage employees to do more than their usual job duties (Ahmadi, 2010).

Leadership style is one of the significant factors found to influence employee OCB. The main leadership styles that have received empirical attention in relation to OCB over the years include transformational leadership (Asgari *et al.*, 2008; Bettencourt, 2004; Schlechter & Engelbrecht, 2006; Vigoda-Gadot, 2007a), transactional leadership (Bettencourt, 2004; Vigoda-Gadot, 2007a) and charismatic leadership (Babcock-Roberson & Strickland, 2010). Only a few studies considered the effect of servant leadership on OCB despite the importance of servant leadership in contemporary business organizations (Ehrhart, 2004; Organ, 2006). Servant leadership is a leadership style that places the followers' interests over and above the leader's own interest (Joseph & Winston, 2005). Research establishes that servant leadership may be more conducive to organizational citizenship behaviors due to its focus on follower development, community building, authentic leadership, and shared leadership (Laub, 2003; Sendjaya, Sarros, & Santora, 2008). The best indicator of servant leadership is that followers are more likely to become servants themselves. Stone, Russell, & Patterson (2004) argue that the motive of the servant leader's influence is not to direct others but rather to motivate and facilitate service and stewardship by the followers themselves. Followers' service to others and stewardship of organizational resources could be construed as organizational citizenship behaviour.

One of the prominent early studies that attempted to investigate the effect of servant leadership on OCB is Ehrhart (2004). He found that servant leadership

indirectly influenced OCB, specifically helping behaviour, and conscientiousness. Additionally, Walumbwa, Hartnell, and Oke (2010) investigated the mediating effect of commitment to the supervisor, self-efficacy, procedural justice climate, and service climate on the relationship between servant leadership and organizational citizenship behaviors (OCBs). Their results revealed partial mediation and recommended for testing other mediators under which OCB will be more significantly enhanced. Another study conducted by Vondey (2010) revealed that servant leadership was significantly but partially correlated with OCB. Since studies on servant leadership and OCB study are still new and limited (Ehrhart, 2004; Vondey, 2010; Walumbwa *et al*., 2010), more studies are needed to better understand the relationship and to validate further the initial significant relationship between servant leadership and OCB by investigating their relationship in a different context.

Furthermore, literature reveals that the link between servant leadership and OCB was not only direct, but indirect (Ehrhart, 2004; Walumbwa *et al*., 2010). It was demonstrated that servant leadership was related to OCB through mechanisms including procedural justice climate (Ehrhart, 2004), commitment to the supervisor, self-efficacy, procedural justice climate and service climate (Walumbwa *et al*., 2010). Following partial mediation of the tested variables, recommendation for future studies to test other mediators under which OCB will be more significantly enhanced were made (Organ, 2006; Walumbwa *et al*., 2010).

Important to the present study is the attempt to establish a relationship between servant leadership and psychological ownership, which previous studies have not considered. Psychological ownership is a state of mind in which an

9

employee develops possessive feelings for the target (Van dyne & Pierce, 2004) such as the job (Peters & Austin, 1985), organization (Dirks, Cummings, & Pierce, 1996), the products created (Das, 1993); the practices employed by the organizations (Kostova, 1998); and specific issues in the organizations (Pratt & Dutton, 2000). Servant leadership can be an essential factor for achieving psychological ownership among employees in organizations. Because of certain special features of servant leaders including humility, caring flexibility (Geller, 2009), and egalitarianism (Waterman, 2011), psychological ownership could manifest as a result of servant leadership.     Therefore, psychological ownership could be one of the expectations from workers in return for experiencing servant leadership.

Recent studies demonstrate that psychological ownership for the organization is positively related to job satisfaction, organizational commitment and organizational citizenship behaviour (O'Driscoll, Pierce & Coghlan, 2006; Van Dyne & Pierce, 2004; VandeWalle, Van Dyne & Kostova, 1995), and financial performance (Wagner *et al*., 2003). Psychological ownership can be a possible integrative and mediating variable in linking servant leadership and OCB. With respect to employees' exchange relationship with the organization (Blau, 1964), as a result of positive servant leader behaviors that make employees feel being cared for by the organization, OCB may be motivated. Thus, the mediating potentiality of psychological ownership on the relationship between servant leadership and OCB is likely. Therefore, servant leadership would be tested as an antecedent factor for motivating psychological ownership and as a mediating variable on the relationship between servant leadership and OCB.

Precisely, this study attempts to fill two main gaps on predicting employee OCB: (1) investigating the mediating effect of psychological ownership on the relationship between servant leadership and OCB; (2) investigating the influence of servant leadership on psychological ownership. Currently, no study was found in the literature regarding the mediation effect of psychological ownership on servant leadership and OCB relationship. Similarly, there was no study on the relationship between servant leadership and psychological ownership.

## 1.3    Research Questions

Referring to the discussion about the need for this research to be carried out as stated earlier, the following questions are to be addressed:

1. Do servant leader behaviors relate to employee OCB-I and OCB-O?

2. Does psychological ownership relate to employee OCB-I and OCB-O?

3. Do servant leader behaviours influence psychological ownership among employees?

4. Does psychological ownership mediate the relationship between servant leader behaviours and employee OCB-I and OCB-O?

## 1.4    Research Objectives

Generally, this study aims at investigating the role played by organizational leadership and psychological state of individual employees in enhancing employee OCB in organizations. Specifically, the study has the following objectives:

1. To examine the relationship between servant leader behaviours and employee OCB-I and OCB-O.

2. To examine the relationship between psychological ownership of organization and employee OCB-I and OCB-O.

3. To examine the relationship between servant leader behaviours and psychological ownership for the organization among employees.

4. To examine the mediating role of psychological ownership on the relationship between servant leader behaviours and employee OCB-I and OCB-O.

## 1.5    Scope of the Study

This study investigates the mediating effect of psychological ownership on the relationship between servant leadership and organizational citizenship behaviors (OCBs) among employees of public utilities sector in Nigeria. Specifically, this study investigates three public utility organizations including Power Holding Company of Nigeria (PHCN) Plc, Nigeria Telecommunications (NITEL) Limited and Kano State Water Board (KSWB) operating in Kano, Nigeria. Lower and middle level employees were considered the unit of analysis of this study because the study focuses on how servant leader behaviours influence employee OCBs.

The utility sector organizations in Nigeria are at a critical history of transformation from completely being public corporation to substantially being private. At this critical stage, OCB is ever much needed than ever before because efficiency is the main reason for transformation of the utility organizations. Moreover, the post-privatization life of the organization may not be successful without enhanced employee OCB as the challenges and expectations from the

management and most especially the customers will increase. At this important history of transformation, employees represent the biggest force to be reckoned with. The study's choice of lower and intermediate employees as a unit of study is consistent with efforts toward maximizing the benefits of OCB in terms of enhancing organizational effectiveness and performance, improving social capital and helping to retain and attract best employees (Podsakoff, Paine, & Bachrach, 2000). In short, lower and intermediate employees represent important forces for organizational performance and efficiency.

## 1.6 Significance of the Study

This study, which is about investigating the mediating effects of psychological ownership on the relationship between servant leadership and employee OCB, is important to both theory and practice.

### 1.6.1 Theoretical Significance

Theoretically, this study is going to make several contributions to leadership, and OCB literature. Firstly, the present study will reveal if servant leadership can significantly affect psychological ownership. Psychological ownership is relevant in motivating employees to exhibit positive behaviors as a result of personal meaning employees have when experiencing psychological ownership (Pierce *et al*., 2003). The antecedents of psychological ownership have not been extensively addressed in the empirical literature (Avey *et al,* 2009; Hou *et al,* 2009) and, therefore, this study will be significant in filling the gap by considering servant leadership.

Secondly, the present study will add to the existing literature by demonstrating the effect of servant leadership on employee OCB. Previous SL-OCB studies were largely conducted in the western contexts, while this one focuses on a newer non-western context. Thirdly, the study proposes a servant leadership model for increasing employee OCB through developing psychological ownership. Generally, for the first time the current study will add to the existing knowledge by demonstrating the mediating effects of psychological ownership on enhancing the effects of servant leadership on employee OCB. Still on the significance of this study, Walumbwa *et al*., (2010) suggest that future research might consider cross-cultural comparative studies of servant leadership. In line with this, the present study will be conducted in a different context (i.e. Nigeria). This study will add to the existing knowledge by demonstrating how servant leadership influences employee OCB in a distinct context.

### 1.6.2 Practical Significance

In addition to theory, and literature development, this study is significant in practical sense. Generally, this study is important to public utility sector organizations by providing insight into the mechanisms for enhancing employee OCB. Findings of this study provide directions and guidelines for development of human capital policies, management practices and management development programs that can help elicit employee OCB in public utility sector organizations, and all other public service organizations. Achievement of employee OCB can further enhance effective functioning of all segments of the organization and hence overall goal attainment of the organization (Podsakoff, Ahearne, & Mackenzie, 1997). Specifically, this study

provides important managerial tips for the efficient functioning of the three ailing utility organizations including Power Holding Company of Nigeria Plc (PHCN), Nigeria Telecommunications Limited (NITEL), and Kano State Water Board (KSWB) by revealing better strategies for developing psychological ownership, as well as achieving cooperativeness and helping behaviors among employees (OCBs). With servant leadership in place, the ailing utility organizations could motivate development of ownership feelings for the organization and all forms of positive voluntary behaviours (OCB-I, OCB-O) among employees.

## 1.7    Outline of the Study

This thesis is presented in five chapters. Chapter one generally introduces the whole work. The chapter is made up of the background to the study, problem statement, research questions, research objectives, scope of the study, significance of the study, the outline of the thesis and, finally, definition of key terms.

.        Chapter two basically conceptualizes three major constructs of this study: servant leadership, psychological ownership, and organizational citizenship behaviour. This chapter also highlights previous studies on servant leadership, psychological ownership, and organizational citizenship behaviour. Moreover, the potentialities of psychological ownership as a mediator on the relationship between servant leadership, and organizational citizenship behaviour are discussed.

Chapter three discusses the conceptual framework of the study, which arises from review of the literature, the direct and indirect relationship between the key constructs and proposed hypotheses of the research. Moreover, this chapter discusses the research methodology employed for the study. The chapter explains

the research setting, population of the study, sampling technique, method of data collection and method of data analysis.

Chapter four presents the descriptive analysis of the respondents for this study, empirical results, key findings, test of hypotheses of the study. Finally, the chapter provides discussions of findings, limitations to the study, directions for future research, suggestions for practice, and conclusion.

## 1.8    Definition of Key Terms

### 1.8.1    Organizational Citizenship Behavior

Organizational citizenship behavior (OCB) is defined as "behavior that is discretionary, not directly or explicitly recognized by the formal reward system, and in the aggregate promotes the efficient functioning of the organization (Organ, 1988, p. 4).

### 1.8.2    Organizational Citizenship Behavior for Individual

Organizational citizenship behavior for individual is defined as behavior that immediately benefits specific individual and indirectly contribute to the organization's effective functioning such as courtesy and altruism (Williams & Anderson, 1991).

### 1.8.3    Organizational Citizenship Behavior for Organization

Organizational citizenship behavior for organization is defined as behavior that benefits the organization as a whole, such as conscientiousness, sportsmanship and civic virtue.

### 1.8.4 Servant Leadership

Servant leadership is defined as a leadership style where leaders place the needs of their subordinates before their own needs and centre their efforts on helping subordinates grow to reach their maximum potential and achieve optimal organizational and career success (Greenleaf, 1977).

### 1.8.5 Putting Subordinates First

Putting subordinates first is defined as a leader's attitude and behavior targeted at prioritizing and satisfying work needs of his/her immediate followers (Liden et al., 2008).

### 1.8.6 Helping Subordinates Grow and Succeed

Helping subordinates grow and succeed is defined as a leader's attitude and behavior targeted at demonstrating genuine concern for career growth and development of his/her followers (Liden et al., 2008).

### 1.8.7 Conceptual Skill

Conceptual skill is defined as a leader's as the leader's competence, knowledge and experience about the organization and tasks at hand, which allows him/her to effectively support and assist others, especially immediate followers (Liden et al., 2008).

### 1.8.8 Creating Value for the Community

Creating value for the community is defined as a leader's conscious and genuine concern for helping surrounding community to achieve their objectives (Liden et al., 2008).

### 1.8.9 Emotional Healing

Emotional healing is defined as a leader's act of showing sensitivity to others' personal concerns (Liden et al., 2008).

### 1.8.10 Psychological Ownership

Psychological ownership is defined as a state of mind that employees have toward a specific object of the organization that the object or organization is "his/hers" or "theirs" (Furby, 1978; Pierce et al., 1991).

# CHAPTER TWO

# LITERATURE REVIEW

## 2.1    Introduction

This chapter is concerned with review of relevant literatures of organizational citizenship behaviour (OCB), servant leadership and psychological ownership. In particular, this chapter attempts to conceptualize the main constructs of the study and their theoretical trajectory. This chapter also discusses relevant studies that are useful to help with the formulation of the research hypotheses.

## 2.2    General Overview of Employee Performance

Organizational citizenship behaviour is a form of job performance. Orthodox definitions of job performance have restricted the construct to the simple coverage of task-related behaviors (Devonish & Greenidge, 2010). Task performance is concerned with the effectiveness with which job incumbents perform activities that contribute to the organization's technical core (Borman & Motowidlo, 1997). Broadly speaking, three categories of employee job performance have been identified: task performance, extra-role performance, and counterproductive work behaviour (Rotundo & Sackett, 2002; Sackett, 2002; Viswesvaran & Ones, 2000). Task performance usually refers to in-role behaviour, which is defined as fulfilment of tasks that are required by the formal job description (Borman & Motowidlo, 1997). Extra-role performance, often referred to as organizational citizenship behaviour (OCB) or contextual performance is defined as behaviour that is beneficial to the organization and goes beyond formal job requirements such as helping colleagues at work, working extra hours, making suggestions for

improvement (Organ, 1988). Counterproductive work behaviour (CWB), on the other hand, is defined as intentional employee behaviour that is harmful to the legitimate interests of an organization (Gruys & Sackett, 2003). Based on the definitions, therefore, OCB and CWB are opposites as the former benefits the organization while the latter harms it (Riketta, 2008).

Organizational citizenship behaviour (OCB) is defined as "individual behaviour that is discretionary, not directly or explicitly recognized by the formal reward system, and in the aggregate promotes the efficient and effective functioning of the organization" (Organ, 1988, p.4). Explicit in the definition of OCB is the notion of discretion, which means that engagement in OCB is completely voluntary since a person cannot be punished for failing to engage in it (Organ *et al*., 2006). In other words, OCB is a voluntary behaviour that cannot be enforced by supervisors, or superiors. However, it does not mean that it is altruistically driven. Although OCB is expressed in the form of altruism, the two concepts cannot be considered the same. This is because the motives are quite different. Altruism is about selflessness while OCB is performed due to several motives. Performance of OCB is sometimes believed to be driven by ego-centric motives, which may be often unconscious. Hence, to decide whether OCB is altruistic or not, determining the motive is important (Organ *et al*., 2006).

Secondly, individuals who perform OCB will not be formally rewarded. Behaviour that goes beyond "in-role" is voluntary and, therefore, not directly recognized by the organizational formal reward system. Even though, theoretically speaking, formal reward for OCB is not formally recognized, in some situations sophisticated modern evaluation and reward systems may take into consideration

some kinds of OCB (Zheng, Zhang, & Li, 2012). Depending on the context, some OCB might provide some future reward promises. However, the fact remains that benefits for performing OCB are not contractually guaranteed in advance (Organ *et al.*, 2006).

Thirdly, OCB should be able to produce positive outcomes in the context they are performed. The performance of OCB must have direct or indirect effects on improving the organization's efficiency and effectiveness.

## 2.3     Evolution of OCB

The concept of OCB has evolved over time, which can be traced to the works of Barnard's (1938) willingness to cooperate, Roethilisberger and Dickson's (1939) informal collaboration and Katz and Kahn's (1966) patterns of individual behaviour.

### 2.3.1     Chester Barnard (1938) and Theory of Cooperative System

The organizational citizenship behaviour (OCB) concept can be originally traced to the work of Chester Barnard in 1938 in his theory of cooperative system. In his seminal work *The Functions of the Executive*, Barnard defined formal organization as a system of cooperative activities of two or more persons. He also stressed that the "willingness of persons to contribute efforts to the cooperative system is indispensable" (p.83). These arguments suggest the importance of willingness to cooperate among organizational members to achieve organizational goals, and objectives. In contrast to his contemporaries who place a strong emphasis on the importance of formal structure, and controls as the essence of organizations, Barnard underscored cooperative systems among members for organizational effectiveness. He further maintained that willingness is more than simple compliance. It means

21

that authority in the form of supervisors or managers cannot force workers into performing cooperative behaviors, it is purely the prerogative of the worker to contribute to the community or not.

In comparison, OCB and Barnard's (1938) willingness are conceptually similar as they both are voluntary. Barnard's willingness to cooperate described in the literature for more than seven decades is what Organ called "discretionary behaviour" in the last three decades.

### 2.3.2 Roethlisberger and Dickson (1939) and Hawthorne Studies

Hawthorne studies by Roethlisberger and Dickson (1939) are another conceptual scenario within organizational theory related to OCB. The Hawthorne studies began in 1924 in the biggest production plant of the Western-Electric-Company – the Hawthorne Works in Chicago. A different number of researchers including Roethlisberger and Dickson have conducted experiments of different sorts between 1924 and 1932. The first round of experiments was to establish a relationship between levels of illumination and productivity. Another series of experiments were to find out the effects of rest, pauses, and schedules of work. Another series of experiments were to find the factors of work-satisfaction. The last experimental study among the Hawthorne studies was called BWOR study where the influence of teamwork on performance was examined. BWOR was derived from bank wiring observation room. The bank wiring observation room experiments were aimed at understanding the influence of an informal group and peer group pressure on worker's productivity.

The Hawthorne studies represent a significant development in organizational theory because they were able to demonstrate that leadership has to consider not only efficiency and effectiveness in an economic sense but also socio-psychological conditions. Hawthorne studies revealed that apart from technical processes, social dynamics, appreciation of work, and sense of acceptance incredibly affect worker productivity (Heinrich, 2002). More specifically, the Hawthorne studies demonstrated that improvement of productivity is not only dependent on manipulative ability of management in respect to arrangement of pauses, hours of work, or favourable working conditions, but also the forces of informal, and unpredictable cooperation within the work, as well as changes in supervisory treatment of the workers (Organ *et al*., 2006).

Roethlisberger and Dickson (1939) provided behavioural analyses of Hawthorne studies. They clearly demarcated between formal and informal organization. The formal organization is marked by a system of rules and policies that regulate the workers' activities, while informal organization describes the unplanned differentiation and integration of individuals within a particular organization. The informal organization system should not be taken as opposing element to the formal organization; it should rather be taken as a necessary condition for collaboration and making of the formal organization to work (Roethlisberger & Dickson, 1939). Co-workers in a positive mood collaborate with each other in a way that goes beyond the formal job requirement (Roethlisberger & Dickson, 1939). The concept of OCB is found to be similar with "informal collaboration", which is a system of unpredictable cooperation among a group of people that enables a better functioning of the formal organization.

### 2.3.3   Katz and Kahn (1966)

Katz and Kahn's (1966) innovative and spontaneous behaviour has also been instrumental to the development of OCB concept. They argued that there are three types of patterns of individual behaviour required for organizational functioning and effectiveness: (1) joining the system and staying within it; (2) fulfilling the in-role requirements; and (3) going beyond these in- role requirements. Regarding the first behaviour, they asserted that for an organization to be well functioning, some number of employees is needed as high rate of turnover is costly for an organization. Katz and Kahn alternatively called the second behaviour "dependable behaviour". It refers to the requirements needed for a particular role, indicating that employees' behaviour should be restricted to predictable patterns within the working context. This particular behaviour demands that each organizational member fulfils his/her role requirements to meet or even exceed standards of performance. Finally, regarding going beyond these role requirements, Katz and Kahn described it as "innovative and spontaneous behaviour" necessary for accomplishments of organizational functions. Innovative and spontaneous behaviors are described as change-oriented actions (Katz, 1964). They further argued that innovative and spontaneous behaviour includes gestures that promote positive work climate, cooperation, and maintain a favourable working climate. The organization as a system would be weak and could break down without those unpredictable spontaneous cooperative actions. Stressing the importance of innovative and spontaneous behaviors to the evolution of OCB, Podsakoff *et al*. (2000) reported that the roots of almost every form of helping behaviour (OCB) is traceable to the work of Katz (1964).

From the discussions in the previous sections, it is evidently clear that Katz and Kahn's innovative and spontaneous behaviour shares some similarities with OCB in two important ways. Firstly, innovative and spontaneous behaviour is unpredictable, suggesting that it is similar with OCB feature of being discretionary. Secondly, both behaviors are described as those beyond role requirements, and are also essential for the effective functioning of the organization.

Table 2.1 summarizes the trajectory of the development of OCB concept and next sections deal with the evolution of OCB and its dimensions.

**Table 2.1**
*Trajectory of OCB Theoretical Evolution*

| Year | Authors | Concept | Main Idea |
|---|---|---|---|
| 1938 | Barnard | Willingness to cooperate | Stressing the importance of organizational members' "willingness to cooperate" in early organizations in order to improve the organizational functioning, and survival. |
| 1939 | Roethlisberger & Dickson | Informal collaboration | Stressing the importance of a system of unpredictable cooperation among a group of people (informal organization) that enables a better functioning of the formal organization. |
| 1966 | Katz & Khan | Innovative and spontaneous behaviors | Stressing the important behaviour required of organizational members for the effective functioning of their organization. |

**Source: The Researcher**

## 2.4 Evolution of OCB Dimensions

The dimensions of OCB have evolved over time. Over the four decades of OCB research, the OCB construct has been conceptualized in several ways (e.g., Bateman & Organ, 1983; Organ, 1988, 1990; Smith *et al*., 1983; Van Dyne, Graham, & Dienesch,1994; Williams & Anderson, 1991), thus indicating lack of consensus in

its dimensions (Khalid, 2005; Podsakoff *et al.*, 2000). However, Podsakoff et al., (2009) reported that the two most popular conceptualizations are those developed by Organ (1988) and Williams and Anderson (1991).

The following sections discuss the evolutionary stages of OCB and the resultant dimensions at each stage.

### 2.4.1   Smith *et al.*'s (1983) Conceptualization of OCB

After Bateman and Organ (1983) researched on the linkages between satisfaction and citizenship behaviors, Anna Smith, one of Organ's students, began to research on citizenship behaviour. She interviewed many supervisors in manufacturing plants based in Southern Indiana in the United States asking them: "What are the things you would like your employees to do more of, but really can't make them do, and for which you can't guarantee any definite rewards, other than your appreciation?" (Smith *et al.*, 1983). Smith found 16 behaviors to be the most frequent answers such as (1) helping other employees with their work when they have been absent; (2) exhibiting punctuality in arriving at work on time in the morning and after lunch and breaks; and (3) volunteering to do things not formally required by the job.

Having convinced that the extra-role efforts increase an organization's efficiency and effectiveness, Smith decided to examine them in more detail. She then asked a group of MBA students, who happened to be experienced working managers to consider a specific co-worker and rate the frequency with he/she engages in such behaviors in order to classify them into various types. Her results showed two different types of OCB. The first type is called "altruism". This OCB dimension is directed at a specific individual, usually a co-worker, but sometimes a

supervisor, or a client. An example of this OCB dimension is helping a new employee to know the job, or to help a co-worker with work overload, and to solve a problem for co-workers. The altruism dimension was later called "helping" (Podsakoff *et al.*, 2000). The second OCB is called "generalized compliance" and later "conscientiousness". Examples of this OCB type or dimension include punctuality, less unnecessary breaks, refusing to be absent, and no private conversations during working time.

Through her research, Smith has made enormous contributions to OCB literature, setting the cornerstone for further research on OCB and its antecedents.

### 2.4.2   Organ *et al.*'s (1988) Conceptualization of OCB

Subsequently, Organ (1988) added three more dimensions (i.e., courtesy, civic virtue, and sportsmanship) to the existing two Smith *et al.*'s (1983) OCB dimensions. Now there are five OCB dimensions (i.e., altruism, courtesy, civic virtue, conscientiousness, and sportsmanship). Civic virtue is referred to as the responsibility of the subordinates to participate in the life of the firm such as attending meetings which are not required by the firm and keeping up with the changes in the organization (Organ, 1988). Civic virtue is the subordinate participation in organization's political life and supporting the administrative machinery of the organization (Deluga, 1998). This dimension was believed to be derived from Graham's (1991a) findings which stated that employees should have the responsibility to be a good citizen of their organizations. Podsakoff *et al.* (2000) argued that civic virtue behaviors reflect an employees' recognition of being part of their organization and acceptance of the responsibilities that follow. Many

researchers found that civic virtue has significant impacts on the organization in terms of enhancing the quantity of performance and reducing customer complaints (Walz & Niehoff, 1996). According to Konovsky and Organ (1996), part of the items for measuring civic virtue include: (1) staying informed about developments in the organization; (2) attending and participating in meetings regarding the organization; and (3) offering suggestions for ways to improve operations in the organization.

Conscientiousness refers to an employee performing his or her assigned tasks (in-role behaviors) in a manner that exceed formal requirements. Such behaviors include working long hours and volunteer to perform jobs besides duties. Researchers revealed that conscientiousness relates to organizational politics among employees (McCrae & Costa, 1987). According to Konovsky and Organ (1996), parts of the items for measuring conscientiousness include: (1) Not taking unnecessary time off work; (2) My work attendance is above the norm; (3) Being mindful of how once behavior affects co-worker's jobs.

Altruism discretionary behaviour was defined by Smith *et al*. (1983) as acts of employee to provide assistance to individuals with particular problems to complete their tasks in the workplace under unusual circumstances. Podsakoff *et al*. (2000) demonstrates that altruism is significantly related to performance evaluations and positive affectivity. According to Konovsky and Organ (1996), parts of the items for measuring altruism include: (1) helping co-workers who are absent from work, (2) helping co-workers who have heavy workloads, and (3) helping and supporting new employees.

Courtesy is described as act of thoughtfulness and considerate behaviour that prevents work related problems with others (Werner, 2007). It is concerned with proactive gestures with other workers in the organization before acting, giving advance notice and passing along information (Chiboiwa, Chipunza, & Samuel, 2011). It is also concerned about notifying the organization if an employee would be reporting late for work or notifying co-workers before acting in some ways that will affect their jobs or informing colleagues of delay in work progress, especially in interdependent or interrelated work activities constitutes courtesy behaviour (Chiboiwa *et al.*, 2011). Previous research demonstrated that courtesy behaviors reduce intergroup conflict and diminish the time spent on conflict management (Podsakoff *et al.*, 2000). Additionally, Chiboiwa *et al.* (2011) proposed that courtesy behaviour allows for effective work coordination and planning which are essential in achieving predetermined organizational goals. According to Konovsky and Organ (1996) part of the items for measuring courtesy include: (1) avoiding creating problems for others; (2) considering the effects of my actions; and (3) consulting with other people who might be affected by my actions or decisions.

Sportsmanship is defined by Organ (1988) as the behaviour of warmly tolerating the irritations that are an unavoidable part of nearly every organizational setting. Similarly, it is also defined as the willingness to tolerate the inevitable inconveniencies and impositions that are inherent in the organization without complaining (Allison, Voss, & Dryer, 2001). Examples of workplace circumstances include work under sub-standard working conditions that are not injurious and using obsolete equipment to perform. Podsakoff and MacKenzie (1997) argued that good sportsmanship would enhance the morale of the employees and subsequently reduce

employee turnover. Furthermore, Organ *et al.* (2005) contended that sportsmanship by employees reinforces their level of loyalty and commitment to the organization. According to Konovsky and Organ (1996) part of the items for measuring sportsmanship include: (1) Trying to make the best of the situation, even when there are problems; (2) Ability to tolerate occasional inconveniences when they arise; and (3) Do not complain about once work assignments**.**

### 2.4.3   Williams and Anderson (1991) OCB Conceptualization

Controversies arose over the question of who benefits from OCB. While a number of scholars believe that OCB benefits the whole organization (Graham, 1991a; Van Dyne, Graham, & Dienesch, 1994), others suggest that OCB is aimed at helping individual organizational members (Chen, Hui, & Sego, 1998; Werner, 2007; Wright, George, Farnsworth, & McMahan, 1993). Adding further to the controversy, Graham (1991a, p. 260), stated that "instances of generosity directed at individuals would qualify as altruism or as some other forms of pro-social behaviors, but not as organizational citizenship behaviors (OCB)". Against this background, Williams and Anderson (1991) suggested a two-dimensional conceptualizations of OCB with one dimension called "organizational citizenship behaviors that benefit specific individuals – OCB-I" and one dimension called "organizational citizenship behaviors that benefit the whole organization – OCB-O". Williams and Anderson's (1991) conceptualization was derived from Organ's (1988) five dimensions of OCB. OCB-I comprises altruism and courtesy of Organ's (1988) OCB dimensions while OCB-O comprises conscientiousness, sportsmanship and civic virtue.

The present study adopts OCB-I and OCB-O dimensions for three reasons. First, different mechanisms drive organizationally targeted and individually targeted organizational citizenship behaviors (Marinova, Moon, & Van Dyne, 2010), suggesting that OCB could be better conceptualized along its beneficiaries. Second, Vigoda-Gadot, Beeri, Birman-Shemesh, and Somech (2007) reported that majority of researchers have identified OCB-I and OCB-O as two-factor construct of OCB. Third, is the instrument's performance in previous studies. Williams and Anderson (1991) measurement has been used widely by OCB scholars (e.g., Dimitriades, 2007; Sesen, Cetin, & Basim, 2011; Vigoada-Gadot, 2007b), and has demonstrated high levels of reliability and validity (Kim, O'Neill, & Cho, 2010).

### 2.4.4 Van Dyne *et al*.'s (1994) Conceptualization of OCB

Van Dyne *et al*. have proposed that OCB was based on application of Inkeles's (1969), and Graham's (1991) political philosophy. Inkeles argued that political philosophy encompasses multidimensionality of citizenship comprising obedience, loyalty and participation. Inkeles argued that individuals' responsible participation in governance is a vital contribution of active citizens which plays an important role in helping organizations to survive.

Obedience is concerned with respect for orderly structures and processes. Obedience provides that state's citizens should be responsible for obeying the state's existing laws that also protect them. Loyalty is concerned with promoting, and protecting the community and volunteering with extra effort for the common good of the community. Participation concerns with citizens willingness to participate in governance, keep well informed, share information and ideas with fellow citizens,

engage in discussions about controversial issues, vote during constitutional elections, and encourage others to do likewise (Graham, 1991a; Van Dyne *et al.*, 1994). Graham strongly argued that these three categories of citizenship can be used in organizational settings.

Against the previous discussed background, Van Dyne *et al.* (1994) found support for the political philosophy based citizenship dimensions (i.e., obedience, loyalty, and participation). Accordingly, Van Dyne *et al.* provided suitable definitions for the adapted citizenship dimensions. Loyalty is conceptualized as identification with and allegiance to an organization as a whole. Obedience is adherence to organizational rules and regulation including punctuality in task completion. Participation is the willingness on the part of employees to involve in organizational system such as attending meeting and sharing information. Dyne *et al.* found that OCB participation dimension can be extended to include three subscales of social participation, advocacy participation, and functional participation instead of Inkles's (1969), and Graham's (1991a) single generalized category of participation. Social participation is concerned with interpersonal interaction and social communication; advocacy participation is concerned with voluntary behaviors directed toward the organization; and functional participation is concerned with individual contribution that helps in organizational functioning (Van Dyne *et al.*, 1994).

### 2.4.5  Morrison's (1994) Conceptualization of OCB

Morrison (1994) conceptualizes OCB as consisting of five dimensions including altruism, conscientiousness, sportsmanship, civic virtue and keeping up with

changes. His dimensions overlap with other sister conceptualizations (e.g., Van Dyne *et al.*, 1994; Van Scotter & Motowidlo, 1996; Williams & Anderson, 1991). For example, Morrison's altruism dimension overlaps with Organ's (1988) altruism and courtesy dimensions. Conscientiousness dimension, though a bit narrower than Organ's conscientiousness, was a reproduction of Organ's conscientiousness. Her sportsmanship includes components of Organ's sportsmanship. Her civic virtue dimensions include component of Organ's civic virtue dimension. The dimension of keeping up with changes overlaps with Organ's civic virtue and conscientiousness dimensions. Self development dimension is concerned with behaviors that employees exhibit voluntarily in order to improve their knowledge, skills, and abilities (Podsakoff *et al.* 2000).

### 2.4.6   Moorman and Blakely's (1995) Conceptualization of OCB

Moorman and Blakely (1995) proposed a four-dimensional model of OCB namely interpersonal helping, individual initiative, personal industry, and loyal boosterism. Their scale was based on Graham's (1989) dimensions of OCB but contained items which referenced Organ's (1988) dimensions. Interpersonal helping dimension involves actions that have to do with doing extra to help co-workers with work-related problems. Individual initiative dimension is concerned with encouraging others to try new and more effective ways of doing their jobs as well as motivating them to express their ideas and opinions. Personal industry dimension involves actions such as performing one's duties with unusually few errors, extra-special care, and always beating deadlines for completing work. Finally, loyal boosterism involves promoting and defending organization within and outside the organization.

Lepine *et al*. (2002) argued that the four dimensions developed by Moorman and Blakely (1995) are similar to Organ's (1988), and Van Dyne *et al*.'s (1994) models. Interpersonal helping include courtesy, altruism behaviors and social participation; individual initiative consists of sportsmanship and advocacy participation; personal industry includes conscientiousness, obedience and functional participation; and finally boosterism includes civic virtue and loyal behaviors. Moorman, and Blakely's scale was developed to combine Graham's idea (i.e., dimensionality) that corresponds closely with political science theory on social citizenship and Organ's dimensions in order to make Organ's (1988) five factor model much more meaningful.

### 2.4.7 Van Scotter and Motowidlo's (1996) Conceptualization of OCB

Van Scotter and Motowidlo (1996), in a bid to make unique contribution to OCB study, administered research instrument in which they requested supervisors to rate their employees on how likely they feel the employees were to engage in certain behaviors. The study produced two OCB dimensions: interpersonal facilitation, and job dedication. Although the two dimensions appear to be unique by their names, they overlap with previous dimensions. Interpersonal facilitation is concerned with employees' willingness to give assistance to co-workers while job dedication is concerned with employees' willingness to consistently give maximum efforts to perform tasks, or any organizational duty. The dimension includes elements of Organ's dimensions of sportsmanship, civic virtue and conscientiousness.

The dimension overlaps with Organ's (1988) dimensions of altruism and courtesy; Morrison's (1994) altruism dimension; and Van Dyne *et al*.'s (1994)

dimension of social participation. Observations revealed that interpersonal facilitation overlaps with Organ's OCB dimensions of altruism and courtesy dimensions. It also overlaps with Morrison's (1994) dimension of altruism and Van Dyne *et al*.'s (1994) dimension of social participation dimension. In addition, job dedication overlaps with Organ's dimensions of sportsmanship, civic virtue and conscientiousness. It also overlaps with Van Dyne *et al*.'s (1994) dimension of functional participation and Coleman and Borman's (2000) dimension of job-task citizenship performance.

### 2.4.8 Organ's (1997) Conceptualization of OCB

One major argument in the discussion of the OCB dimensions concerns with whether some of the OCB forms (e.g., helping and compliance) really fit into the definition because they might as well be considered as "in-role behaviors" to a certain extent (Organ *et al*., 2006). Consequently, OCB dimensions were expanded to include peacekeeping and cheerleading by Organ in 1997. Peacemaking is intermediary position of a particular co-worker who has realized some symptoms of conflict between two, or more of his co-workers. The peacemaker is not only concerned about recognizing the conflict between others but he/she actively intervenes as a moderator (Organ *et al*., 2006). Cheerleading is concerned with behaviors of employees intended to show respect and recognition for good work of co-workers.

### 2.4.9 Coleman and Borman's (2000) Conceptualization of OCB

Coleman and Borman (2000) came up with yet another OCB conceptualization. They proposed new categories of OCB based on behaviors of beneficiaries because

previous dimensions did not represent elements that fit the broader definition of OCB construct (Coleman & Borman, 2000). The proposed three broad categories of OCB are interpersonal citizenship performance, organizational citizenship performance and job-task citizenship performance. Interpersonal citizenship performance refers to behaviour that benefits other organizational members. It includes Organ's (1988) altruism and courtesy dimensions and, thus, is similar to Williams and Anderson's (1991) OCB-I. Organizational citizenship performance refers to behaviour that benefits the organization. It includes Organ's sportsmanship, civic virtue and conscientiousness dimensions and, thus, is similar to Williams and Anderson's (1991) OCB-O. The third dimension, job-task citizenship performance, refers to behaviour that reflects extra effort and persistence on the job, dedication to the job and the desire to maximize one's own job performance (OCBJ). Although job-task citizenship performance seems to be outside the scope of Organ's notion of OCB, it is quite similar to the functional participation (Van Dyne *et al*., 1994) and job dedication (Van Scotter & Motowidlo, 1996) dimensions.

### 2.4.10 Podsakoff *et al*.'s (2000) Conceptualization of OCB

In 2000 Podsakoff and colleagues in a meta-analytic study of previous OCB dimensions (e.g., Coleman & Borman, 2000; Moorman & Blakely, 1995; Organ, 1988; Van Scotter & Motowidlo, 1996; William & Anderson, 1991) classified the OCB dimensions into seven categories. They are helping behaviour, sportsmanship, organizational loyalty, organizational compliance, individual initiative, civic virtue and self-development. Among them, only self-development appears to be unfamiliar and has not been conceptualised previously. Self-development is concerned with employees' willingness to advance their knowledge and skills and hence contribute

to the organization (George & Brief, 1992). Podsakoff *et al*. found that individual initiative received the least research attention among the seven identified dimensions because it is difficult to distinguish individual initiative from in-role behaviour (Van Scotter & Motowidlo, 1996). Some examples of individual initiative include employee's effort to encourage co-workers to try new ideas of doing their jobs and motivating them to express their ideas and opinions.

In sum, OCB has been conceptualized in different ways by different scholars, indicating no uniformity in the measurement of OCB construct as there are many overlaps between the dimensions. The overlaps suggest that there is need for an increased amount of effort aimed at developing theory that can guide OCB definition and measurement to provide better understanding of OCB. Table 2.2 provides the summary of the OCB dimensions as indicated in the extant literatures.

**Table 2.2**
*OCB Dimensions and Sources*

| Dimension | Definition | Source |
|---|---|---|
| Altruism | Willingness of employees to help co-workers on specific aspects of their job. | Smith *et al*. (1983). |
| Conscientiousness | Willingness of employees to perform well beyond the minimum role requirements. | Smith *et al*. (1983). |
| Sportsmanship | Willingness of employees to accommodate and g*et al*ong with some organizational deficiencies without complaining, or grievances. | Organ (1988). |
| Courtesy | Willingness of employees to prevent work-related problems with others. | Organ (1988). |
| Civic virtue | Willingness of employees to responsibly participate in activities that affect the life of the organization. | Organ (1988). |

**Table 2.2 (Continued)**

| Dimension | Definition | Source |
|---|---|---|
| OCB-I | Willingness of employees to direct behaviors toward benefitting individuals co-workers (OCB-I), and comprises of Organ *et al*. 1988 altruism and courtesy. | Williams and Anderson (1991). |
| OCB-O | Willingness of employees to direct behaviors toward benefitting the whole organization (OCB-O), and comprises of Organ *et al*. 1988 conscientiousness, sportsmanship, and civic virtue. | Williams and Anderson (1991). |
| Loyalty | Loyalty is conceptualized as identification with, and allegiance to an organization as a whole. | Van Dyne *et al*. 1994. |
| Participation | Participation is the willingness on the part of employees to involve in organizational system such as attending meeting and sharing information. Participation is subdivided into social, advocacy, and functional. | Van Dyne *et al*. (1994). |
| Obedience | Obedience is adherence to organizational rules, and regulation including punctuality in task completion. | Van Dyne *et al*. (1994). |
| Keeping up with changes | Keeping up with changes overlaps with Organ's (1988) civic virtue and conscientiousness dimensions. | Morrison (1994). |
| Individual initiative | Individual initiative dimension is concerned with encouraging others to try new and more effective ways of doing their jobs as well as motivating them to express their ideas and opinions. | Moorman and Blakely (1995) |
| Loyalty boosterism | Loyal boosterism involves promoting and defending organization within and outside the organization. | Moorman and Blakely (1995) |
| Personal industry | Personal industry dimension involves actions such as performing one's duties with unusually few errors, extra-special care, and always beating deadlines for completing work | Moorman and Blakely (1995). |
| Interpersonal helping | Interpersonal helping dimension involves actions that have to do with doing extra to help co-workers with work-related problems. | Moorman and Blakely (1995). |
| Interpersonal facilitation | Behaviour concerned with employees' willingness to give assistance to co-workers. The dimension overlaps with Organ's (1988) dimensions of altruism and courtesy; Morrison's (1994) altruism dimension; and Van Dyne *et al*.'s (1994) dimension of social participation. | Van Scotter and Motowidlo (1996). |

**Table 2.2 (Continued)**

| Dimension | Definition | Source |
|---|---|---|
| Job dedication | Behaviors concerned with employees' willingness to consistently give maximum efforts to perform tasks, or any organizational duty. The dimension includes elements of Organ's dimensions of sportsmanship, civic virtue, and conscientiousness. | Van Scotter and Motowidlo (1996). |
| Peacekeeping | Behaviour of putting oneself in intermediary position between two, or more of his co-workers after discovering some symptoms of conflict. | Organ (1997). |
| Cheerleading | Behaviors of employees intended to show respect and recognition of good work for co-workers. | Organ (1997). |
| Interpersonal citizenship performance | Behaviour that benefits other organizational members. It includes Organ's (1988) altruism and courtesy dimensions and, thus, is similar to Williams and Anderson's (1991) OCB-I. | Coleman and Borman (2000). |
| Organizational citizenship performance | Behaviour that benefits the organization. It includes Organ's sportsmanship, civic virtue and conscientiousness dimensions and, thus, is similar to Williams and Anderson's (1991) OCB-O. | Coleman and Borman (2000). |
| Job-task citizenship performance | Behaviour that reflects extra effort and persistence on the job, dedication to the job and the desire to maximize one's own job performance (OCBJ). | Coleman and Borman (2000). |
| Organizational loyalty | Behaviors such as promoting the image of the organization to outsiders, defending, and protecting the organization from external threats, and remaining committed to the organization even under adverse conditions. | Podsakoff *et al*. (2000). |
| Self development | Behaviors employees exhibit voluntarily in order to improve their knowledge, skills, and abilities. | Podsakoff *et al*. (2000). |

**Source: The Researcher**

## 2.5    OCB Related Concepts

Organizational citizenship behaviour (OCB), extra-role behaviour (ERB), pro-social behaviour (PSB), organizational spontaneity (OS) and contextual performance (CP) are often used inter-changeably to explain positive behaviors that are discretionary and mandatory to perform. However, the concepts are conceptually distinct as discussed below.

39

### 2.5.1   Pro-social Behaviour

Katz and Kahn (1966) stated that there are three behavioural types necessary to make a system function: (1) joining the system and staying within it; (2) fulfilling the in-role requirements quantitatively and qualitatively; and finally (3) going beyond the role requirements. Borman and Motowidlo (1993) argued that the meaning of pro-social behaviour is partially covered by the Katz and Kahn's third type of behaviour. Pro-social organizational behaviour is defined as behaviour intended to promote the welfare of individuals or groups to whom the behaviour was directed (Brief & Motowidlo, 1986). It is described as a type of behaviour that will benefit the individual, or group of individuals to whom the behaviour is directed (Brief & Motowidlo 1986). Brief and Motowidlo (1986) further stated that pro-social organizational behaviour is positive act oriented toward others in order to produce and maintain wellbeing and integrity. It is pertinent to mention that pro-social organizational behaviors are targeted at co-workers (e.g. supervisor, peer or subordinates), consumers or even the organization itself. Dimensions of pro-social organizational behaviour include civic virtue and loyalty (Borman & Motowidlo, 1993).

Generally, acts such as helping, sharing, cooperating, donating and volunteering are examples of pro-social behaviour (Brief & Motowidlo, 1986). Pro-social organizational behaviour construct is broad as it includes several forms of behaviors with different consequences (functional and dysfunctional) to individual and organization (Brief & Motowidlo, 1986). While pro-social behaviors are organizationally functional, they can also be organizationally dysfunctional (Brief & Motowidlo, 1986). Examples of organizationally dysfunctional pro-social behaviors

include helping co-workers to achieve personal goals that are inconsistent with organizational objectives, rendering services to clients in ways contrary to organizational interest and falsification of records to prevent someone from deserved organizational censure.

Pro-social organizational behaviour is conceptually different from OCB because people involved in normal pro-social behaviour are usually unknown to each other. Contrarily, the beneficiary and benefactor of OCB must be working together in the same organization. Additionally, OCB concept involves more impersonal dimensions besides helping including such things as high levels of conscientiousness and involvement in organizational activities beyond the general requirements. Lastly, conceptualization of pro-social organizational behaviour indicates that pro-social behaviors include both in-role and extra-role as well as functional and dysfunctional behaviour to the organization. On the other hand, OCB is limited to only functional extra-role performance that is not prescribed by the organization.

### 2.5.2   Organizational Spontaneity

Organizational spontaneity is yet another construct that is similar to OCB. Katz (1964) coined spontaneous behaviors to mean going above and beyond the job including engaging in discretionary behaviors. George and Brief (1992) defined organizational spontaneity as extra role behaviors at free will that contribute to organizational effectiveness. Five dimensions of organizational spontaneity are identified: helping co-workers, protecting the organization, developing one-self, making constructive suggestions, and spreading goodwill (George & Brief, 1992).

Although organizational spontaneity and OCB are similar, OCB construct is more clearly different in respect to the use of reward system and its functional contribution to organizational functioning. Viswesvaran and Ones (2000) argued that reward systems are allowed to be designed to recognize organizational spontaneity. In addition, Katz and Kahn (1966) suggested that innovative and spontaneous behaviors do not necessarily and directly contribute to organizational functioning but are vital to organizational survival and effectiveness.

### 2.5.3 Extra Role Behaviour

Extra-role behaviour is another construct similar to OCB. Extra-role behaviour consists of behaviors that are not formally required by any particular job, yet which help to form the social context of all jobs, thus facilitating effectiveness (Borman & Motowidlo, 1997; Organ, 1988). Similarly, Organ *et al*. (2006) defined extra-role behaviour as behaviour, which benefits the organization that goes beyond existing role requirements. Furthermore, extra-role behaviour is defined as a discretionary behaviour outside the prescribed role which includes both functional and dysfunctional behaviors that benefit or is intended to benefit an organization (Van Dyne *et al*., 1995). Specifically, extra role behaviour as stated by Van Dyne and Le Pine (1998) is: (1) not role prescribed; (2) not formally recognized by reward systems; and (3) not subject to punitive measures when not performed by employees. Furthermore, according to Van Dyne and Le Pine (1998), extra-role behaviour such as OCB involves performing affiliative, promotive, prohibitive, and challenging behaviors. Promotive behaviour concerns with behaviour that promotes changes in the organization. Prohibitive behaviour concerns behaviors related to sustaining and protecting organization against unfavourable conditions. Affiliative

behaviour concerns with cooperating with other people. Challenging behaviour, on the other hand, involves promoting new concepts and changes that although their outcomes may be good for the organization, they can cause negative effects on relationships.

Extra-role behaviour involves four major types of behaviour: helping, stewardship, voice, and whistle-blowing, and one of these embodies two different behaviors described above as extra-role behaviors (Van Dyne, & Le Pine, 1998). For example, helping is an example of affiliative-promotive behaviour, voice is an example of challenging-promotive behaviour, stewardship is an example of affiliative-prohibitive behaviour, and whistle-blowing is an example of challenging-prohibitive behaviour. Helping is described as acts of voluntary assistance that cements the social boundaries between people. Voice involves encouraging and suggesting ideas for innovative changes that potentially and constructively challenges the status-quo ante. Therefore, voice is a type of extra-role behaviour that is particularly fundamental when an organization faces fast changing environments and needs to adapt as swiftly as possible. Van Dyne and Le Pine argued that helping and voice behaviors should not be confused with behaviors that are required in all jobs. Stewardship is concerned with behaviour aimed at orienting other people toward benefiting and serving the community (Liden, Wayne, Zhao, & Henderson, 2008). Finally, whistle-blowing is described as an act of disclosing unethical or illegal practices perpetrated within an organization, as well as initiating actions that can terminate such practices (Mary, Linda, & Howard, 2009).

Literatures indicate that extra-role behaviour has been extensively researched and measured as OCB (Chiaburu & Baker, 2006; Koster & Sanders, 2006). Some

researchers view extra-role behaviour as the same with OCB because of their similar characteristics (LePine *et al.*, 2002; Schnake, 1991), thus leading to measuring the two constructs as one. But the two constructs are conceptually different. Extra-role behaviors include elements of pro-social organizational behaviour such as whistle blowing and principled organizational dissent which are actions by organizational members that may be challenging or prohibitive to the organization (Morrison & Phelps, 1999). Here, extra-role behaviour's conceptualization goes beyond that of OCB by including actions by organizational members that are challenging, harmful or prohibitive to the organization (Organ *et al.*, 2006).

### 2.5.4    Contextual Performance

The concept of contextual performance has developed from the research work of Borman and Motowidlo in 1993 when they attempted to establish empirical evidence for the hypothesized relationship between personality of an individual and his/her dedication to work and productivity. In order to increase the probable linkage between the personality and individual's dedication to work, Borman and Motowidlo classified workers' performance into task performance and contextual performance. Results demonstrated that knowledge, abilities, and skills are the best predictors of task performance, while personality/dispositional variables best predict the contributions that employees make to the social and psychological context within which task performance occurs (Organ *et al.*, 2006).

Contextual performance is another form of extra-role behaviour that is very much similar to OCB construct. Borman and Motowidlo (1993) defined contextual performance as those behaviors that support the motivational and social context in

which the task performance takes place. Persistent enthusiasm and extra effort to complete own task, volunteering, helping and cooperating with others, following organizational rules and procedures, endorsing, supporting and defending organizational objectives, interpersonal facilitation and job dedication are prescribed as dimensions of contextual performance (Borman & Motowildo, 1997). Some examples of contextual performance include employees voluntarily doing more than the job requires helping others or contributing to organizational effectiveness, tackling difficult work assignments enthusiastically, volunteering to perform additional duties, helping new employees and respecting organizational rules even when they are inconvenient.

OCB and contextual performance are perceived as very similar to each other (Liu, 2009). Like OCB, contextual performance is not role-prescribed and, therefore, does not fit into the definition of task performance. The behaviour is also important for organizational effectiveness (Bowman & Motowidlo, 1993). However, there is slight theoretical difference between the two constructs as can be seen in Table 2.3 where a summary regarding comparison between OCB and related constructs is presented. In addition, Viswesvaran and Ones (2000) differentiated OCB from contextual performance in theoretical terms in that contrary to OCB, the contextual performance construct does make reference to role expectations, job description or formal rewards. In other words, OCB was developed as a standalone dimension of job performance developed to apply across jobs, whereas contextual performance was developed within an overall model of the construct of job performance: task versus contextual performance. Contextual performance may consequently include all types of employee dedication to work and helping behaviour, thus posing a

question of whether this behaviour is voluntary or required. It is therefore argued that the motivation behind contextual performance might range from being completely selfless and people-oriented to egocentric ones that induce one to behave socially in order to satisfy all the job-requirements in the best possible manner.

**Table 2.3**

*Comparison between OCB and Related Constructs*

| Behavioural constructs | Pro-social organizational behaviour | Extra role behaviour | Organizational spontaneity | Organizational citizenship behaviors | Contextual performance |
|---|---|---|---|---|---|
| Role prescribed/extra role | It includes both role prescribed and extra-role | It includes behaviors that are outside the role prescribed | It includes both role prescribed and extra-role | It includes behaviors that are outside the role prescribed | It includes behaviors that are outside the role prescribed |
| Organizationally functional/ organizationally dysfunctional | It includes both functional, and dysfunctional behaviors | It includes both functional, and dysfunctional behaviors | It includes both functional, and dysfunctional behaviors | It includes only functional behaviors | It includes only functional behaviors |
| Reward possibility | It could be recognized by organization's formal reward system | It could be recognized by organization's formal reward system | It could be recognized by organization's formal reward system | It is not recognized by organization's formal reward system | It could be recognized by organization's formal reward system |
| Necessity for discretion | Behaviour does not have to be discretionary. | Behaviour has to be discretionary. | Behaviour does not have to be discretionary. | Behaviour has to be discretionary. | Behaviour does not have to be discretionary. |
| Relationship between the parties in the exchange | The beneficiary and benefactor of the behaviour may not have any prior relationship. | The beneficiary and benefactor of the behaviour must be working together in the same organization. | The beneficiary and benefactor of the behaviour must be working together in the same organization. | The beneficiary and benefactor of the behaviour must be working together in the same organization. | The beneficiary and benefactor of the behaviour must be working together in the same organization. |

**Source: The Researcher**

Contextual performance encompasses much of the same behaviour as OCB, but does not stipulate that the behaviour has to be discretionary and non-rewarded, as OCB was originally conceptualized. Importantly, Organ (1997) has reviewed his initial requirements for OCB to be extra-role and not directly rewarded. The reviewed and current requirements mean that OCBs are voluntary and that they contribute to organizational effectiveness, thus adding to similarity of the two constructs.

In sum, OCB comprises all positive job-related behaviors (Graham, 1991a). As discussed, OCB has similarities to related constructs such as pro-social organizational behaviors, extra-role behaviors, and contextual performance in that all the constructs focus on positive contribution and effective functioning of organizations. However, OCB is different from all the related constructs because OCB has to necessarily be discretionary, not explicitly rewarded, and functionally positive to the organizational effectiveness (Organ, 1988). Table 2.3 provides the summary of similarities, and differences between OCB and related constructs.

Having provided detailed insights into conceptualization and evolution of OCB concept, OCB dimensions and OCB related concepts, the next section presents the reviewed literature on OCB antecedents.

## 2.6    OCB Antecedents

Different antecedents of OCB have been found by different studies. In his meta-analytic study, Podsakoff *et al.* (2000) summarized OCB antecedents into four main categories namely individual characteristics, task characteristics, organizational characteristics, and leadership behaviors. The present study adopts Podsakoff *et*

*al.*'s (2000) classification because of its systematic inclusion of all OCB antecedents.

### 2.6.1   Individual Characteristics

The fact that OCB has been described as a personal choice (Organ, 1988), employee or individual characteristics were widely investigated for significant relationships with OCB. Podsakoff *et al.* (2000) reported that individual characteristics comprise two factors: (1) morale factors which include employee satisfaction, organizational commitment, perceptions of fairness, perceptions of leader supportiveness, and psychological contract. Morale factors have been the most frequently investigated antecedents of OCB and found to have significant relationships with OCB; and (2) dispositional factors which include agreeableness, conscientiousness, positive affectivity and negative affectivity. The dispositional factors predispose individual employees to certain orientations regarding co-workers and supervisors which might well increase the likelihood of receiving treatment that they would recognize as supportive, fair, worthy of commitment and satisfying. Podsakoff *et al.* argued that these dispositional variables could be seen as indirect contributors of OCBs rather than direct causes because the dispositional factors "predispose people to certain orientations vis-à-vis coworkers and managers" (Organ & Ryan, 1995, p. 794).

The major individual characteristics that have been found to be significantly related with OCB include: (1) job satisfaction (Bateman & Organ, 1983; Bharathidasan & Jawahar, 2013; Chou, & Pearson, 2012; Moorman, 1993); (2) personality (Dávila & Finkelstein, 2010; Jung & Yoon, 2012; Kappagoda &

Kulathunga, 2013; Organ, 1994; Organ & Lingl, 1995); (3) organizational commitment (Kim, 2006; Mishra, Mishra, & Kumar, 2010; Williams & Anderson, 1991; Ueda, 2011); (4) perceived organizational support (Bell & Menguc, 2002; Chen & Chiu, 2009; Ehigie & Otukoya, 2005; Kaufman, Stamper, & Tesluk, 2001; Paille´, Bourdeau, & Galois, 2010), (5) organizational justice (Erturk, 2007; Burton, Sablynski & Sekiguchi, 2008; Yılmaz & Tas¸dan, 2009); (6) demographic variables such as age, gender, and tenure (Chou & Pearson, 2011; Chattopadhyay, 1999; Emmerik & Jawahar, 2005; Farrell & Finkelstein, 2007; Garg & Rastogi, 2006; Kidder, 2002; Suresh & Venkatammal, 2010); and (7) psychological state (Coyle-Shapiro, 2002).

According to the literature, job satisfaction, demographic, perceived organizational support variables are among the individual characteristics that have attracted much research attention. Job satisfaction is described as a pleasurable or positive emotional state resulting from the appraisal of a person's job or job experiences (Locke, 1976). Bateman and Organ (1983) were the first to investigate the relationship between job satisfaction and OCB. In their research, citizenship behaviors were measured on altruism and general compliance dimensions. Their longitudinal study which employed dyadic approach of data collection demonstrated significant positive relationship between job satisfaction and OCB. They established that employees who feel satisfied with their jobs or organization are more prone to contribute extra effort as pay back to the organization. Job satisfaction and OCB research continue to flourish after Bateman and Organ's (1983) seminal work with appreciable significant relationship (Bharathidasan &

Jawahar, 2013; Chou & Pearson, 2012; Foote & Tang, 2008; Moorman, 1993; Murphy, Athanasou, & King, 2002; Peng & Chiu, 2010).

Over the years, research interest on demographic variables and their influence on OCB have increased tremendously. Demographic variables such as gender, age, tenure, experience, marital status, and race have been reported to have significant influence on OCB (Chattopadhyay, 1999; Chou & Pearson, 2011; and Suresh & Venkatammal, 2010). Chou and Pearson (2011) investigated the role of demographic variables such as age, gender, and tenure in influencing OCB of the highly skilled IT professionals and found that age and tenure are significant predictors of IT professional's OCB. Furthermore, the significant relation that exists between gender and tenure was further supported by Garg and Rastogi (2006). In their study to assess the significant differences in the climate profile and OCB of teachers working in public and private schools of India, Garg and Rastogi found that female teachers exhibit more OCB than their male counterparts. This was because the female teachers are more interactive, provide more social support to their colleagues, and are more helpful to their colleagues under unusual circumstances. In the same study, Garg and Rastogi also revealed that teachers who have attained the age of 36 years and above tend to exhibit higher levels of OCB than those who are younger. This is because teachers who are above 36 years are more experienced, generous, and tactful in handling conflicts with courtesy, conscientiousness and sportsmanship, hence protecting the image of the school from getting tarnished.

Perceived organizational support is another individual factors that has been well researched in relation to OCB (Bell & Menguc, 2002; Chiang & Hsieh, 2012;

Ehigie & Otukoya, 2005; Liu, 2009; Paille´ *et al.,* 2010; Sulea, Virga, Maricutoiu, Schaufeli, Dumitru, & Sava, 2012). Perceived organizational support refers to an individual's innermost feelings about how an organization cares for the employees (Chiang & Hsieh, 2012). Eisenberger, Huntington, Hutchison, and Sowa (1986) argued that employee POS emanates from the organization's deep show of care and, therefore, the more personal and humane the management behaves toward employees, the higher the level of POS would be and consequently the more OCB from the employees.

### 2.6.2   Organizational Characteristics

Organizational characteristics are purported to be important antecedents of OCB (Podsakoff *et al*., 2000). Most of the studies on organizational characteristics and their effects on OCB have used social exchange theory (Blau, 1964) to explain the exchange relationships (Haworth & Levy, 2001; Moideenkutty, 2005; Moorman, Blakely, & Niehoff, 1998). The organizational characteristics found in OCB literature include: (1) organizational structure (Ali, Mehmud, Baloch, & Usman, 2010; Haworth & Levy, 2001; Zoghbi-Manrique-de-Lara & Melia´n-Gonza´lez, 2009); (2) work environment (Peng & Chiu, 2010; Turnipseed, 1996; Yu & Chu, 2007); (3) organizational culture (Williams *et al*., 2007; Wollan, Sully de Luque, & Grunhagen, 2009); (4) organizational climate (Dimitriades, 2007; Garg & Rastogi, 2006; Van Dyne, Kossek, & Lobel, 2007); (5) organization right (Bienstock, DeMoranville, & Smith, 2003; (6) supervisor attribution and rating (Coyle-Shapiro, 2002; Eastman, 1994); (7) trust (Wat & Shaffer, 2005); (8) organizational formalization (Raub, 2008; (9) social capital (Ariani, 2010); and (10) formal and informal communications (Kandlousi, Ali, & Abdollahi, 2010).

Literature indicates that organizational climate and organizational culture are among organizational characteristics that have attracted much research attention, and have been found to have significant effects on OCB. Organizational climate represents the internal and external struggles by members, the type of people who make the organization, the means of communication, the work processes, and the exercise of authority within the organization (Katz, & Kahn, 1978). Garg and Rastogi (2006) in their study to assess the significant differences in the climate profile and OCB showed that, due to the different climate profiles, teachers working in public schools demonstrated higher degree of OCB than those in private schools. In a different study to explore the usefulness of inter-relationship between service climate and job involvement on customer-focused organizational citizenship behaviors of frontline employees in a diverse cultural context, Dimitriades (2007) found support for the relationship between service climate and customer-OCB. This finding is important because it demonstrated that positive work environment can have impact on customers. Additionally, Van Dyne, Kossek, and Lobel (2007), found facilitating work practices such as collaborative time management, redefinition of work contributions, proactive availability, and strategic self-presentation enhance group-level organizational citizenship behaviour.

Organizational culture is another important organizational characteristic found to have significant effects on OCB. It is defined as fundamental assumptions, values, perceptions, and norms that are shared by organizational members and passed on to new members as correct (Daft, 2005). Organizational culture is argued to be a fundamental factor managers use to direct the course of their organizations (Smircich, 1983). Accordingly, Williams *et al*. (2007) studied the impact of culture

53

on job satisfaction, patient commitment, and extra-role performance among Canadian physicians. They found that culture has a relatively weak impact on organizational outcomes. More elaborately, human resources culture, which stresses cultural cohesion and employee morale by focusing on training and development, was found to have significant positive effect on job satisfaction, bureaucratic culture is positively related to patient commitment, and patient commitment is strongly and positively related to extra-role behaviour. Their results also revealed that entrepreneurial culture, which values change, growth, resource acquisition and organizational adaptability (Williams *et al.*, 2007), is strongly and positively related to extra-role behaviour (OCB).

Similarly, in investigating the impact of cultural dimensions of in-group collectivism, uncertainty avoidance, performance orientation and humane orientation OCB in a diverse workforce, Wollan *et al.* (2009) found that in-group collectivistic environment, which is the environment reflecting stronger uncertainty avoidance, low performance orientation and a high humane orientation, invokes OCB.

### 2.6.3   Task Characteristics

Among all the antecedents of OCB, task characteristics have received the least research attention (Podsakoff *et al.*, 2000). Task characteristics involve the roles and functions required for a particular task accomplishment. Literatures indicate that studies that have looked into the effects of task characteristics on OCB have produced mixed results (Bing, Davison, Minor, Novicevic, & Frink, 2011; Chen & Chiu, 2009; Chughtai, 2008; Todd & Kent, 2006; Ueda, 2011). Job characteristics

that have been considered include: (1) job involvement (Bing *et al.*, 2011; Chughtai, 2008; Ueda, 2011); and (2) task variables (Chen & Chiu, 2009; Todd & Kent, 2006; Paillé (2011).

Defined as the extent to which and individual employee is cognitively preoccupied with, engaged in, and concerned with his/her present job (Paullay, Alliger, & Stone –Romero, 1994), job involvement is a task variable that has been investigated in OCB studies. Specifically, Chughtai (2008) found job involvement to be positively correlated with both in-role job performance and OCB. Furthermore, he revealed that organizational commitment partially mediates the job involvement-performance relationship with in-role performance and OCB. However, he revealed that job involvement exerts a stronger impact on OCB than on in-role performance.

Other task variables including task significance, intrinsically satisfying tasks, and job self-efficacy have also been researched (Chen *et al.*, 2009; Paillé, 2011; Todd & Kent, 2006). Specifically, Todd and Kent investigated how task variables impact OCB. The study revealed that task significance, intrinsically satisfying tasks and job self-efficacy directly and positively impact helping behaviour, conscientiousness and sportsmanship dimensions of OCB. Additionally, partial mediation of job satisfaction was found between task variables and OCB dimensions. Similar study conducted by Chen and Chiu (2009) revealed that three job characteristics (i.e., task identity, task significance, autonomy) positively affect the performance of employee's OCB through the mediating effect of job involvement. However, skill variety was demonstrated to have a negative effect on OCB.

Other task characteristics studied include job standardization and stressful work. Chen *et al*. (2009) revealed significant positive relationship between job standardization and OCB in a hospitality industry in Taiwan. Further analysis using ANOVA revealed that high degree of job standardization indicates a higher level of OCB. Recently, Paillé (2011) demonstrated no relationship between stressful work and OCB. This finding was expected because stressful work may hamper the willingness of employees to support their colleagues when they encounter difficulties. In sum, task characteristics that appear to affect employees' morale positively are more prone to motivate performance of OCB than others that do not.

The next section deals with leadership and evolution of leadership theories. Then, servant leadership, as the main independent variable of the present study, will be discussed.

## 2.7    Leadership

### 2.7.1    Definition of Leadership

A few things might be more important to human activity than leadership. Effective leadership makes nations sail through times of peril. Effective leadership helps business organizations strive and succeed. It enables public and non-profit organizations fulfil their missions. At family level, effective leadership enables the family help children grow strong and healthy, become educated and productive adults in the society (Rossotti, 2005). Leadership is, therefore, a pervasive and important aspect that has been attracting interest across different stakeholders.

A leader is the most influential person in the organization (Podsakoff, MacKenzie, & Bommer, 1996) as he/she could determine organizational

effectiveness (Daft, 2008; Greenberg & Baron, 1997). There are numerous definitions of leadership that have been offered based on traits, behaviors, situation, and relationship (Daft, 2008; Greenberg & Baron, 1997). Burns (1978) defined leadership as a process where an individual induces other individuals for certain goals and acts according to values and motivation. In another scenario, a leader is seen as a person who uses power and influence to instruct the followers and guide their activities toward goal attainment (Yukl, 1998). Therefore, an individual who has power to change other individuals' mind and get them to work along with goals is considered to exercise leadership (Cherrington, 1994; Johns & Moser, 2001; Kreiner & Kinicki, 2008). In view of the preponderance of leadership definitions, there is no universally accepted leadership definition (Winston & Patterson, 2006).

The variety of leadership definitions share several commonalities. Firstly, leadership occurs within a group; it takes place in the interaction between leaders and subordinates (Cherrington, 1994). Secondly, leadership is a process of influence (Baker, 2002). It involves influencing followers' thought, attitudes and behaviors so that common shared goals can be attained (Cummings, McGregor, Davey, Lee, Wong, Lo *et al*., 2010). Thirdly, leadership places a high focus on goal attainment. A leader sets mission, formulates strategy, coordinates work activities and increases subordinates' commitment toward attaining the desired goals and objectives (Greenberg & Baron, 1997). Barker (2002) concluded that leadership is about two things – process and behaviors.

### 2.7.2  Evolution of Leadership Theories

This section discusses early leadership theories focusing on traits, behaviors, and contingencies. It then highlights neo-charismatic ideal behavioural theories (i.e. emerging leadership theories) that started to become prominent in the 1970s. Finally, this section offers some critiques of the neo-charismatic theories with a special reference to servant leadership style and its effect on organizational behaviors.

### 2.7.2.1 Trait Theory

Scientific inquiry into leadership began in the twentieth century that attempted to identify individual attributes that can universally classify individuals as leaders and non-leaders. Findings of most of the early leadership studies were published around 1930 and 1950. Most of the findings indicated correlation between traits and leader effectiveness (House & Aditya, 1997). But leadership studies conducted across cultures suggest that there is lack of universal traits associated with effective leadership (House & Aditya, 1997). This is because early traits studies had major shortcomings that include: (1) lack of theory to guide the investigation of leadership traits; (2) no well developed measurement and hence even common traits were contextualized differently; (3) little information about the psychometric properties of the trait measures; (4) total disregard of the situation in explaining leadership traits and leadership effectiveness; and (5) use of samples of adolescents, lower level managers, and supervisors, instead of people in significant leadership positions (House & Aditya, 1997).

Then, in the early 1970s, research interest in leadership traits re-surfaced owing to important influence they have on influencing leadership behaviour and effectiveness (Kirkpatrick & Locke, 1991; House & Aditya, 1997; Robbins & Judge, 2007). Tremendous amount of empirical evidence in support of the trait propositions was recorded. Many new empirically supported traits including honesty, drive, motivation, self-confidence, big five personality traits, cognitive ability, and emotional intelligence (Kirkpatrick & Locke, 1991; House & Aditya, 1997; Robbins & Judge, 2007) were introduced.

### 2.7.2.2 Leader Behaviors

Because of the major weaknesses of traits theories, scholarly dissatisfaction with traits continued to increase, which subsequently led to a growing emphasis on behaviourism in leadership studies and psychology in general (Fiedler & Chemers, 1984; House & Aditya, 1997; Stogdill, 1975). In the mid-twentieth century leadership researchers already shifted their attention from traits to leader behaviors. For almost a 30-year period (i.e., in between 1940s and 1970s), scholars have studied leaders either by direct observation of their behaviour in laboratory settings or by survey questionnaire. In the survey questionnaire, subordinates in field settings were asked to describe the behaviors of people in leadership positions, and then related these descriptions to already provided criteria of leader effectiveness. Much of the research conducted within this paradigm is known as the "behavioural school of leadership" (House & Aditya, 1997; Robbins & Judge, 2007). Three influential schools of thought including Ohio State University group (Stogdill, 1975), the University of Michigan group (Likert, 1979), and Blake and Mouton

(1966) have greatly influenced the direction of leadership research during this period. The major findings within this period include the following:

Firstly, two broad categories of leader behaviors – task oriented and person oriented behaviors were identified by the Ohio State University group (Stogdill, 1975). Task-oriented or task-focused leadership is a behavioural style in which the leader is fundamentally concerned with the tasks that need to be performed in order to achieve some stated goals. On the other hand, relationship-oriented or relationship-focused leadership is a behavioural style of leadership in which the leader is fundamentally concerned with the motivation, satisfaction and the general well-being of his/her team members.

Secondly, University of Michigan group identified two styles: initiating structure and consideration (Likert, 1979). Initiating structure is a leadership style oriented toward stating required performance, goal, role expectations and constraints (Fleishman, 1973, 1998), which is focused on directing and streamlining subordinates' tasks (Bass, 1990). But consideration is concerned with the extent to which a leader demonstrates concern for the welfare of his/her subordinates group members (Bass, 1990).

Thirdly, two dimensions of leader behaviour called concern for people and concern for production demonstrated graphically by using managerial grid was found by Blake and Mouton (1966). Concern for people is a style of leadership in which the leader accommodates people's needs and prioritizes their interests (Griffin & Ricky, 2010). It is depicted on the y-axis of the managerial grid. On the other hand, concern for production is a style of leadership in which the leader keeps tight schedules, and deadlines. It is depicted on the on x-axis of the managerial grid.

The grid depicts the two dimensions on their axes ranging from low (1) to high (9), thereby creating 81 different positions in which the leader's style may fall.

Similar to the trait research, behavioural approaches also failed to give serious attention to specific role demands of leaders, the contextual circumstances in which leaders function, or the existing differences in personality and dispositions of leaders or followers (DeRue, Nahrgang, Wellman, & Humphrey, 2011).

### 2.7.2.3 Contingency Theories

Between 1960s and 1970s, contingency leadership theory was proposed as remedy to the weaknesses of the previous leadership theories (Trivers, 2009). Contingency leadership theory argues that leader's effectiveness is dependent on various situational factors such as the leadership style, the abilities and behaviors of subordinate followers, and other situational factors. Essentially, the theory argues that there is no best one way of leading and that a leadership style that is effective in some situations may not be necessarily successful in other situations.

Under the contingency theory umbrella, several theories emerged. Prominent among them include: (1) Fiedler's contingency model (Fiedler, 1967; 1971); (2) path-goal theory (House, 1971; House, 1996); (3) Hersey and Blanchard's (1982) life cycle theory; (4) leader-member exchange (Dansereau, Cashman, & Graen, 1973; Dienesch & Liden, 1986); and (5) leader-participation model (Vroom & Yetton, 1973).

Fiedler's contingency model was the first attempt to theoretically explain how situational variables interact and influence the leader personality and behaviour. Fiedler's contingency theory argues that effective performance depends

on the fit between the leader's style and the extent to which prevailing situation gives room for control. Situational control refers to the degree to which the leader is able to control and influence the organizational or group process. Fiedler identifies eight conditions of situational control and develops hypotheses concerning their moderating effects on the relationships between the leader motivation and effectiveness. Different from Vroom and Yetton's (1973) theory that suggests that leaders could and should quickly change leadership styles to adjust to the situation, Fielder maintains that leadership style is born out of stable personality characteristics that are difficult to change (Fielder & Chemers, 1984, 1995; Fielder, 1976). Fiedler's contingency theory has resulted in approximately 200 tests of hypotheses (House & Aditya, 1997). As expected, under chosen various conditions of situational control and various behaviors under the same conditions of situational control, task or relationship-motivated individuals are shown to manifest the same behaviour (i.e., consideration and structuring).

Vroom and Yetton (1973) proposed yet another situational theory of leadership which was re-formulated by Vroom and Jago (1988). The model is premised on the belief that the leader must adjust behaviour to reflect the prevailing task structure. The theory is most suitable in conditions where acceptance of solutions by subordinates is important for effective policy implementation. The theory, therefore, intends to help leaders make decisions that achieve high technical and economic quality solutions to problems, as well as obtain solutions acceptable to subordinates. The model becomes normative since it provides a sequence of rules that should be followed in achieving the quantity and quality of participation in decision-making process. The original leader-participation theory (Vroom &

Yetton, 1973) proposed seven decision-making methods, which have different outcomes under different situations. These decision-making methods range from autocratic to democratic decision processes. As an improvement, Vroom and Jago (1988) revised the model and retained the five original styles but added a set of problem types, thereby expanding the contingency variables to 12. Research findings using both the original and revised leader-participation model have not been encouraging, however, the revised model rates higher in effectiveness (Field & Andrews, 1998). Furthermore, the leader-participation model has been criticized for its complexity (House & Aditya, 1997).

Hersey and Blanchard (1982) also provided their own theoretical contribution to the study of leadership effectiveness. They developed a situational leadership theory that focuses on the subordinates/followers. Hersey and Blanchard (1982) argued that effective leadership depends on the level of the follower's readiness. They went further to propose four leadership styles: telling, selling, participating, and delegating and suggested that each leadership style is appropriate for particular situations dependent upon the subordinates' maturity level described as level of achievement motivation, willingness and ability to take responsibility, job experience and task relevant education. In short, the Hersey and Blanchard's (1982) prescribed leadership style is contingent on follower's maturity. The theory represents a life-cycle model that is analogous to a parent-child relationship in which parents gradually relinquish control as the child grows and matures (Hersey & Blanchard, 1982). Importantly, their model has been found to have a high degree of face validity and has provided a basis for commercial management-training

63

program (House & Aditya, 1997). However, Greenleaf (1997) argues that there have been only a few empirical tests of Hersey and Blanchard's (1982) model.

Another leader-situation theory is leader-member exchange theory. Instead of adopting a uniform leader-follower relationship, leader–member exchange theory proposes that leaders create different types of exchange relationships with their subordinate followers and that the quality of these relationships tend to affect some of the important leader and member attitudes and behaviour (Dansereau, Cashman, & Graen, 1973). The different types of exchange relationships result in situations where some employees will feel that they belong to an inner circle whereas others will perceive that they are outcast members. Usually inner circle employees experience a high-quality exchange with their supervisors, but those who do not usually experience a low-quality relationship. In addition, inner circle employees receive preferential treatment including but not limited to special concern from the supervisor, involvement, superior amount of information, influence, latitude, and high level confidence.

Research has generally and consistently provided empirical support for leader–member exchange theory. Findings demonstrated that leaders clearly differentiate among their followers and more importantly, followers with inner circle status exhibit greater level of OCB and enjoy higher performance ratings, experience lower turnover intentions and job satisfaction (Gerstner & Day, 1997; Gomez & Rosen, 2001; Ilies, Nahrgang, & Morgeson, 2007).

Path-goal theory is another leader-situation theory which proposes that leader influences individuals' performance, satisfaction and motivation in several ways. Path-goal theory is among the first theories to propose the moderating

influence of the situation on leadership effectiveness (Podsakoff *et al*., 1996). House (1971) defines motivational function of the leader as "…..increasing personal payoffs to subordinates for work-goal attainment and making the path to these payoffs easier to travel by clarifying it, reducing roadblocks and pitfalls, and increasing the opportunities for personal satisfaction en route" (House, 1971, p. 324). Path-goal theory was later reviewed by introducing positive effects of the leader – developing subordinates, acting as facilitator for subordinates and building relationship (House, 1996).

According to the revised path-goal theory, a leader may best accomplish facilitator role by adopting one of the following four leadership styles, as dictated by the situation: (1) "directive leadership" where rules and regulations guiding the conducts of individuals are established and specific instructions are given to the individuals or group; (2) "supportive leadership" where leaders become sensitive to subordinates' needs and emphasis is given to good relations within individual employees or groups in an organization; (3) "participative leadership" where group's decision-making is based on the group consultation and information freely flows among members of the group; and (4) "achievement-oriented leadership" where confidence in the groups' ability is being built, challenging and motivating goals are defined and high performance is promoted (Robbins & Judge, 2007).

Despite its theoretical sensibility, empirical proving of path-goal theory has been difficult (Wofford & Liska, 1993). Past research found no empirical support for the facilitation role of the leader as leading to effective leadership (Wofford & Liska, 1993), which was shocking and disappointing to most researchers (Podsakoff *et al*., 1995), leading to suggestions for developing complex, sufficient and rigorous

tests to address the problem (Schriesheim & Neider, 1996; Evans 1996). Consequently, House (1996) concurred that path-goal is a dyadic theory and, therefore, is limited to focusing on leader-follower interactions, ignoring the leader's impact on groups or work units. This shortcoming is common to any dyadic leadership theory, where emphasis is only made on the dyadic leader-follower processes, not minding the organizational processes or culture. However, some scholars have levelled this shortcoming on the entire field of leadership (Yukl, 1999; Zacarro & Horn, 2003).

Despite the observed shortcomings, path-goal theory is seen as a significant influence on succeeding leadership theories. It is the path-goal theory's shortcoming of neglecting the group interactions in leadership that indirectly has led to the development of the concept of "substitutes for leadership" (House, 1996). More importantly, path-goal theory is said to also be the genesis for the development of charismatic leadership, which is believed to have direct influence on transformational and other new leadership theories. Most of the new leadership theories depend on the idea that effective leadership is dependent on the quality of leader-member exchange which is positively influenced by things like personal attention, authentic consideration and stewardship.

**2.7.2.3 New Leadership Theories**

Political historians, sociologists and political scientists have generally endorsed charismatic leadership theory originally proposed by Weber (1947) where followers attribute extraordinary charismatic traits to the leader. Of recent, some scholars have proposed additional theories that appeal to aspects of "charismatic leadership"

(Bass, 1985; Conger, Kanungo & Menon, 2000), such as "authentic leadership" (George, 2003; George, Sims, McLean, & Mayer, 2007), "transformational leadership" (Burns, 1978), and "servant leadership" (Greenleaf, 1978; Graham, 1991). These relatively new theories are classified as neo-charismatic leadership paradigms (Graham, 1991; Fiol, Harris, & House, 1999; Robbins & Judge, 2007), which have become subjects of rigorous and substantial amount of empirical investigation.

Unlike old leadership theories, which largely emphasize logical processes, the new leadership theories emphasize the role of emotions and values. They also recognize the role of symbolic behaviour, with the leader making things meaningful for followers (Yukl, 1999). These new theories have offered a way to describe how leadership influences followers to become committed, involved and achieve high performance above what was initially expected.

### 2.7.2.3.1    Transactional Leadership

Transactional leadership involves contingent reinforcement. It is operated primarily in tandem with a behaviour-reward paradigm where subordinates' performance behaviors are motivated by the leaders' praise, rewards, promises, and are corrected by communicating negative feedback, threats, reprimands or disciplinary actions. Transactional leadership, therefore, involves a leader reacting to followers' behaviour regarding to whether the followers have carried out the assignments given to them by the leader as "transacted" between them.

Bass (1985) identified two dimensions of transactional leadership consisting of management by exception and contingent reward. Contingent reward involves

rewarding the subordinates only when assignments are carried out as "transacted". Management by exception is concerned with the leader's proactive intervention when it is clear that unforeseen problem could potentially hamper the subordinate's performance. Transactional leadership behaviors could be traced to early schools of management theory such as Taylor's scientific management (Taylor, 1919), which focused on maximizing the efficiency of workers by changing work aspects including rewards and compensation.

Bass (1985) identified three main behaviors of effective transactional leaders as: (1) recognizing what followers want from the work organization; (2) trying to see that employees get what they want from their work organization if their performance warrants (i.e., exchange rewards and promises); and (3) trying to be responsive to followers' immediate self-interests if could be met by getting the work done. It could, therefore, be understood how a favourable cost-benefit analysis is important to a transactional leader. The transactional leadership is seen to be closely related to the distinction between management and leadership (Zalesnik, 1977).

It is important to note that most studies did not report significant positive relationship between transactional leadership and employee OCB, partly because of its emphasis on the use of downward influence tactics, pressure and legitimating tactics (Lian & Tui, 2012).

### 2.7.2.3.2 Transformational Leadership

Transformational leadership has received much empirical attention over the years (Bettencourt, 2004; Schlechter & Engelbrecht, 2006; Vigoda-Gadot, 2007; Asgari,

*et al.*, 2008), and it has been the most dominant and influential leadership theory (Asgari, *et al.*, 2008) in contemporary times. Theory of transformational leadership was first proposed by Burns (1978), extended by Bass (1985) and further refined by Bass and Avolio (1994). Burns (1978) argued that moral leadership is the highest calling of a particular leader. Transformational leaders exhibit behaviors that move followers beyond the cost-benefit relationship that characterizes transactional leadership. Transformational leadership is typified by empowering followers to become change agents and evoking performance beyond what is exhibited as a result of transactional relationship (Bass, 1985).

After the initial exploratory factor analysis, Bass (1985) identified a four factor structure consisting of charisma, inspirational motivation, intellectual stimulation and individual consideration. At a later period, Bass (2000) identified four critical transformational leadership dimensions including. individualized consideration, intellectual stimulation, inspirational motivation and idealized influence. Firstly, transformational leaders demonstrate real individualized consideration to followers by means of rationality, intelligence and careful problem solving. Secondly, transformational leaders develop in their followers' intellectual stimulation through personal attention, approachability, coaching, respect and mentoring. Thirdly, transformational leaders inspire followers through communicating expectations and use of symbols to focus efforts. Lastly, transformational leaders serve as role model for high ethical behaviour.

Transformational leaders are intellectually stimulating and help followers through coaching, personal attention and mentoring to facilitate rational thinking and problem solving. Transformational leaders help followers to consider the goals

and values of the organization ahead of their own (Shamir, House, & Arthur, 1992). In transformational relationship, followers are motivated largely by the leader's inspirational vision, not by the promise of an extrinsic reward. Similarly, followers identify with and imitate transformational leaders because of their aspirations. In this sense, transformational leadership is related to Weber's (1947) writing on charismatic leaders in which he argues that most people become obedient to charismatic leaders because of the personal trust they have on the leader and his/her vision. Several scholars have identified vision under the category of charismatic leadership (Conger & Kanungo, 1987; Conger, Kanungo, & Menon, 2000; Shamir, House, & Arthur, 1993). In fact, some scholars consider charismatic and transformational leadership as synonymous (Shamir, House, & Arthur, 1993). But some scholars consider them distinct yet partially overlapping (Bass, 1985; Graham, 1991). In particular, Graham (1991) argued that transformational leadership combines charisma and follower development. However, some other scholars argued that charismatic and transformational leadership may be incompatible to each other (Collins, 2001; Sankar, 2003; Yukl, 1999). Theoretically, most scholars talk of transformational and transactional leaders when, in fact, leaders exhibit a range of both transformational and transactional characteristics. In this case, those considered to be transformational exhibit more of the transformational than the transactional behaviors (Bass & Steidlmeier, 1999). On the other hand, leaders labelled as transactional tend to display more transactional leadership behaviors than transformational.

In sum, many have concurred that transformational leadership is the polar opposite of transactional leadership and further argued that superior leadership

performance is experienced when transformational leaders are in-charge (Boerner, Eisenbeiss, & Griesser, 2007; Jung, 2001; Shin & Zhou, 2003) because of their ability to commit their followers and win their trust (Avolio, Zhu, Koh, & Bhatia, 2004; Dvir, Kass, & Shamir, 2004; Jung & Avolio, 2000). Moreover, transformational leaders are shown to be more effective because they stimulate their followers to be more creative (Jung, 2001; Shin & Zhou, 2003). Research also indicated that such leadership practices increase OCB among employees (Al-sharafi & Rajiani, 2013). More importantly, transformational leadership was found to account for a unique variance in OCB (Lian & Tui, 2012).

### 2.7.2.3.3    Authentic Leadership

The authentic leadership construct was introduced into the leadership literature a decade ago and since then has been a topic of great interest both among scholars (Avolio & Gardner, 2005; Gardner, Cogliser, Davis, & Dickens, 2011; Walumbwa, Avolio, Gardner, Wernsing, & Peterson, 2008) and practitioners (George, 2003). Authentic leadership is "a pattern of leader behaviour that draws upon and promotes both positive psychological capacities and a positive ethical climate to foster greater self-awareness, internalized moral perspectives, balanced processing of information, and relational transparency on the part of leaders working with followers fostering positive self-development" (Walumbwa et. al., 2008, p. 94). The one critical characteristic an effective leader must have is to be one's own person, authentic in every respect (George *et al*., 2007).

Research has tested the validity of authentic leadership construct across cultures with encouraging results. It was demonstrated that authentic leadership

71

positively influences self-awareness and self regulated positive behaviors both leaders and followers. It was further demonstrated to stimulate positive personal growth and self-development of followers (Ilies, Morgeson, & Nahrgang, 2005; Novicevic, Harvey, Buckley, Brown, & Evans, 2006). More importantly, authentic leadership was said to have influencing power on promoting positive employees' attitudes and behaviors, and ultimately organizational performance (Avolio, & Gardner, 2005; George, 2003; Walumbwa *et al*., 2008). Additionally, Ilies *et al*. (2005) argued that authentic leaders have a positive influence on followers' behaviors and their eudemonic well-being because they have been able to provide support for the followers' self-determination. More importantly, authentic leadership was found to have accounted for unique variance in OCB (Walumbwa *et al*., 2008).

Table 2.4 below presents summary of all the major theories of leadership discussed in various sections of the literature review.

**Table 2.4**
*Summary of Theories of Leadership*

| Leadership theory | Main idea | Major researchers |
|---|---|---|
| Trait theory | Identify individual attributes that universally classified individuals as leaders and non-leaders. | Kirkpatrick and Locke (1991), House and Aditya (1997), Northouse (2004), Stogdill (1975). |
| Leader behavioural theory | Describes the behaviors of people in leadership positions, and then relate these descriptions to already provided criteria of leader effectiveness. | Stogdill (1975), Likert (1979), Blake and Mouton, (1966). |

**Table 2.4 (Continued)**

| Leadership theory | Main idea | Major researchers |
|---|---|---|
| Contingency theories | Leader's effectiveness is dependent on various situational factors such as the leadership style, the abilities and behaviors of subordinate followers, and other situational factors. | Fiedler (1967, 1971), House (1971, 996), Hersey and Blanchard (1982), Dansereau, Cashman, and Graen (1973), Dienesch and Liden (1986), Vroom and Yetton (1973). |
| New leadership theories | Recognize the role of symbolic behaviour and the leader in making things meaningful for followers. Emphasize the role of considering emotions and values for leadership effectiveness. | Bass and Avolio (1994), Burns (1978), Collins (2001), Conger and Kanungo (1987), Gardner *et al*. (2011), George (2003), Sankar (2003), Shamir *et al*. (1992),Walumbwa *et al*. (2008),Yukl (1999). |

**Source: The Researcher**

## 2.7.2.4 Servant Leadership

The concept of servant leadership was born out of the America's social turmoil of the 1960s to 1970s (Trivers, 2009). The United States of America was hit by students uprising, riots, extreme social and political upheaval, which are largely caused by high inflation, rising rates of unemployment, crusading journalism, and emergence of the new social movements (Feldstein, 2006). Greenleaf (1977) proposed servant leadership as a novel approach to solving those problems. Greenleaf strongly believed that the fundamental aspect of leadership is the leader's notion that he/she is a servant first before any other consideration. Servant leaders are aware that first and foremost they are servants; hence their first priority is to see how their followers benefit from their leadership. Originally, Greenleaf (1977) defined servant leader as:

Servant first…It begins with the natural feeling that one wants to serve, to serve first. Then conscious choice brings one to aspire to lead…The difference manifests itself in the care taken by the servant – first to make sure that other people's needs are being served. The best test, and difficult to administer, is: do those being served, become healthier, wiser, freer, more autonomous, more likely themselves to become servants? And, what is the effect on the least privileged in society: will they benefit, or at least, not be further deprived? (p. 27).

Greenleaf's concept of servant leadership does not place the leader in high and glamorous position within an organization where resources are meant for supporting the followers to grow and prosper instead of ending up serving the lavish interests of the leader. Instead, Greenleaf's concept of servant leadership places the followers in a high position that the organization's resources are hugely spent on their developmental interests without expecting them to acknowledge or gratify the leader for his/her actions. As opposed to traditional leaders who are fundamentally motivated by desire to lead for personal aggrandizement, servant leaders are influenced to lead largely by their desire to serve followers than to lead followers (Greenleaf, 1977). Therefore, servant leadership is deeply rooted in the intrinsic inclination of the leader to provide service to other people (Bass, 2000; Greenleaf, 1977, Laub, 2004; Sosik, 2005). The servant leader's principles, values, and beliefs are the motivational sources for the leader's behaviour (Farling, Stone, & Winston, 1999). Furthermore, the servant leaders are motivated to lead others because of an underlying attitude of egalitarianism (Smith *et al*, 2004), which means they wholeheartedly believe that they are not better than the followers they lead.

Greenleaf (1977) argued that servant leadership is fundamentally focused on developing subordinates to their fullest potential in aspects including self-motivation, task effectiveness, community stewardship, and future leadership

capabilities. He went further to argue that servant leadership is unique from other leadership forms as it extends beyond the organization's boundary to include service to multiple stakeholders including the servant leaders' communities and society. The observed wide focus of servant leadership makes Ehrhart (2004) to argue that servant leadership is much wider and less dyadic than leader-member exchange theory.

Servant leadership is rooted on the belief that to motivate followers to perform at the fullest potential, leaders must rely on one-on-one communication to understand their needs, desires, abilities, goals and potentials. Then the knowledge about the follower is used by the leader to assist them toward achieving their potential. Servant leaders also help the followers to achieve their potential through building their self-confidence, inspiring trusts, providing information, feedback and resources. Importantly, servant leaders serve as role models for their followers (Lord & Brown, 2001). Greenleaf (1977) argued that servant leaders achieve trust with employees, customers and communities through selfless service to all of them (Greenleaf, 1977). Therefore, servant leadership differs from most other leadership approaches for its focus on personal integrity and forming of strong long-term relationships with employees. Self-interest is not and never become a motivating force for servant leadership, instead, self interest serves to raise motivation to a higher level (Greenleaf, 1977; Pollard, 1996). Similarly, the development of others (Graham, 1991), as well as seeking to serve them and meeting their needs (Covey, 2006; Russell & Stone, 2002) are the real motivating forces of servant leaders. Servant leaders are considered as stewards of the organization who are devoted to

empowering the potential of their followers (Russell & Stone, 2002; Sendjaya & Sarros, 2002).

### 2.7.2.4.1 Origin of Servant Leadership Concept

Servant leadership has been reported to have originated from different sources or scenarios ranging from socio-economic turmoil of 1960s-1970s as stated previously in the preceding section (Trivers, 2009); Christian religion (Bekker, 2006; Delbecq, 1999; Hutchinson, 2009; Vinod & Sudhakar, 2011), Islamic religion (Beekun & Badawi, 1999; Ramadan, 2007; Rafik & Badawi, 1999), and finally storytelling (Hesse, 1956). However, from religious perspective which servant leadership has been well known with, the concept of servant leadership has been said to originate from both Christianity and Islam.

Servant leadership has been linked to the time of Jesus Christ, who practiced and taught the attributes of servant leadership (Bekker, 2006; Delbecq, 1999; Hutchinson, 2009; Sendjaya & Sarros, 2002; Vinod & Sudhakar, 2011). Several sections of the Holy Bible, specifically John 13: 3-5 and 12-15 described Jesus as a servant leader. The particular sections of the Holy Bible stated that in response to the call of Almighty Creator, Jesus rose up from his dinner, took off his dress and fastened towel around his waist. He put water into the washbasin and started to wash his disciples' feet and wiping them with his towel. After he finished washing the disciples' feet, he said to them, "Do you know what I have just done to you?" "You call me the teacher (master) and you are right in doing so, for that is what I am". If I as your teacher, or master has washed your feet, you are in return under

obligation to wash someone else feet. He told the disciples that what I did unto you is just an example of what you too are expected to do unto others.

In addition, to fully understand how Jesus demonstrated servant leadership to his disciples by washing their feet is to consider the historical background information on foot-washing during the lifetime of Jesus Christ. Foot-cleaning by way of washing was necessary when entering home because people's feet were dirty and smelly as a result of the use of animals for footwear and transportation at that time. Therefore, the job of washing people's feet was regarded as a very demeaning job (Ford, 1991). So, at that particular period, neither Jesus himself, nor his disciples had washed feet when they entered the house for dinner. Surprisingly, Jesus washed the feet of his disciples, thus redefining the meaning of the power of leadership from "power over" to "power to" – that is, power that moves a leader to choose to serve other people (Sendjaya, & Sarros, 2002).

Secondly, Islamic writers (Haykal & Al-Faruqi, 1976; Rafik & Badawi, 1999) have recently started claiming that servant leadership originates from Islam and that the attributes of servant leaders published by Western oriented writers (Dennis & Bocarnea, 2005; Barbuto & Wheeler, 2006; Greeleaf, 1977; Liden *et al*., 2008) are in actual sense Islamic. Based on divine revelations from God, the Creator, the attributes of servant leaders were already practiced and taught by Prophet Muhammad (pbuh) since more than 1400 years ago. The living example of the Prophet Muhammad (pbuh) is indeed another aspect of the theoretical framework of servant leadership. In Islam, the two primary roles of a leader include servant-leadership and guardian-leadership. First, the leader is seen as the servant of his followers (*sayyid al qawn khadimuhum* [Haykal & Al-Faruqi, 1976; Rafik &

77

Badawi, 1999]). In this regard, the leader is to seek for the welfare of the followers as well as guiding them towards good. Prophet Muhammad (pbuh) was reported in one of the Hadiths to have said *"Every one of you is a shepherd and everyone is responsible for what he is shepherd of"* (Sahih Bukhari & Muslim, 3:733). This indicates the idea that the concept of servant leadership which is "service unto others" is not a new thing in Islam. In fact, all appointed prophets of God were commanded to obey to serve God directly and serve their followers. Therefore, the concept of servant leadership has been part of Islam since its beginning and has only recently been developed and promoted by Robert Greenleaf (Rafik & Badawi, 1999).

Secondly, an Islamic leader is also depicted to service those that are led by protecting the community against tyranny and oppression, promoting justice, and encouraging God-consciousness and (*taqwa).* In addition, Beekun and Badawi (1999) reported that the Prophet Muhammad (pbuh) has said that a *"commander of the Muslims is a shield for them".* Prophet Muhammad (pbuh) is believed and regarded to be the most ethical and transformative leader the world has ever witnessed (Aabed, 2006; Elsegeiny, 2005). He is believed to have achieved integral consciousness, mentored and guided others in a way that they themselves realize integral consciousness.

Additionally, the Prophet Muhammad's (pbuh) brief leadership tenure of 23 years had led to transformation of Arabian consciousness. Consequently, his servant leader behaviors of moral uprightness, educating, developing followers and genuine concern for welfare of humanity had enabled him to reverse the headlong self-obliteration practices and barbarism of the Arabs (Beekun & Badawi, 1999). Other

78

virtues of servant leadership of the Prophet Muhammad (pbuh) to have possessed include transparency, justice, fairness, tolerance, freedom and honesty. In addition, Prophet Muhammad (pbuh) had been described as practicing justice *(adl and qist)* mutual consultation *(shura)*, mercy and compassion *(rahma* [Omar, 2011]).

Historical evidences are many to connect the Prophet Muhammad's (pbuh) servant leadership qualities with the western. Some of the celebrated servant leader qualities include humility, that is leaders do not think less of the other individuals but just think about themselves less (Greenleaf, 1977); discounting power, that is leaders should deemphasize use of power, deny their power, but should acknowledge that power passes just through them and not from them (Greenleaf, 1977); and listening, empathy, awareness, foresight and commitment on building community (Ambali, Suleiman, Bakar, Hashim, & Tariq, 2011). Consistent with the western servant leadership concept, the servant leadership qualities exhibited by Prophet Muhammad (pbuh) during his lifetime and encouraged others to practice, were reflected on his companions such as Caliph Umar and Caliph Ali. They also lived and died with servant leader qualities as enjoined by Prophet Muhammad (pbuh).

Specifically, Caliph Umar who was the second successor (*Caliph*) after the death of Prophet Muhammad (pbuh) lived in a simple house without any bodyguards, walked the streets of the Holy City of Madinah without any escort and would not sleep every night until he made sure his neighborhood had eaten something as their dinner (Rafik & Badawi, 1999). Similarly, Caliph Ali, in his letter to Malik Al-Ashtar an-Nukhai, who was then appointed as the new Governor of Egypt, strongly encouraged him to remain humble in the course of discharging

his new responsibility and explained to him why "pride and arrogance" are to be avoided. Never say to yourself, 'I am their Lord, their ruler and I must be obeyed submissively and humbly. Such a thought will unbalance your mind, will make you vain and arrogant, will weaken your faith in religion and will make you seek the support of any power other than God's (Rafik & Badawi, 1999).

In a different perspective, servant leadership was said to have originated from a storytelling scenario. It was argued by Spears (1996) that Greenleaf's concept of servant leadership could have developed after Greenleaf read *Journey to the East* written by Nobel Laureate Herman Hesse (1956). The book is a story about a spiritual journey for pilgrimage of a group of men. Central figure in the story of this spiritual journey was Leo, who was a servant accompanying the group of men. He performed the men's menial jobs and motivates them with his spirit and songs. Leo was described as a special person with pleasant and extraordinary qualities that endeared him to everyone in the group and even the animals. Everything went on well until Leo suddenly disappeared, resulting in the group to experience anxiety, dissension and complete disorganization. The group had to abandon the journey after they experienced severe difficulty as a result of Leo's separation from the group. Long after the abandoned journey, Leo was suddenly found by one of the disbanded group members and demanded that Leo appear before the organization that had sponsored the group's spiritual journey. After his appearance before the organization, the narrator was astonished to learn that Leo, who the narrator knew was a servant in the disbanded group, was actually a great and noble leader of the group; he was actually the head of the organization that sponsored the failed journey. The fact that Leo, the servant on the spiritual journey, was actually the

leader of the group has become the basis upon which Greenleaf has conceived the idea of servant leadership.

### 2.7.2.4.2    Conceptualizations of Servant Leadership

After Greenleaf's description of servant leadership, several authors (Barbuto & Wheeler, 2006; Dierendonck & Nuijten, 2011; Farling, Stone, & Winston, 1999; Liden *et al*., 2008; Patterson, 2003; Page & Wong, 2000; Russell & Stone, 2002; Sendjaya, Sarros, & Santora, 2008; Spears, 1996) conceptualized the servant leadership construct in several ways, as indicated in Table 2.5. In an attempt to refine Greenleaf's servant leadership theory, Spears (1996) viewed servant leadership as not a sub-theory, but as a complete theory of leadership that consists of 10 characteristics: listening, empathy, healing, awareness, persuasion, conceptualization, foresight, stewardship, commitment to the growth of people, and building community. In 1996, Spears further characterized servant leadership as an approach that is based on: (1) teamwork and community that seeks to involve people in decision making; (2) ethical and caring behaviour that is enhancing the growth of individuals and improving the caring and quality of organizations. Spears (1996) argued that servant-leadership is more suitable for public service sector organizations.

However, the first to empirically test servant leadership construct were Farling, Stone, and Winston (1999). They demonstrated servant leadership consists of vision, credibility, trust and service. Farling *et al*. argued that servant leaders usually find the source of their values from a spiritual base. Furthermore, they

stressed that empowering followers permits the servant leader to act on the basis of his/her embedded values.

Since Farling *et al.*'s (1999) first conceptualization and empirical testing of servant leadership, as well as their call for continuous empirical research in the study of servant leadership, studies about the construct have continued to grow appreciably. In the same year, Laub (1999) empirically came up with six qualities of servant leadership: valuing people, developing people, building community, displaying authenticity, providing leadership and sharing leadership. The basis of Laub's instrument was the literature and expert panel. Consequently, Laub (2004) described servant leadership as "understanding and practice of leadership that places the good of those led over the self-interest of the leader" (p. 8). Laub (2004), further, stated that servant leaders strive to promote the valuing and development of human beings, building of community, practicing of authenticity, providing of leadership for the good of followers, and sharing of power and status for the common good of all individuals in the organization.

Another important effort in the study of servant leadership is the work of Page and Wongs (2000) that developed a servant leadership instrument that contains 12 servant leadership characteristics: integrity, humility, servant-hood, caring for others, developing others, empowering others, visioning, goal-setting, leading, team-building and shared decision making. Page and Wongs distinguished their servant leadership instrument from the previous scholars in two ways. Firstly, their approach of measuring servant leadership appears to be more comprehensive than all previous instruments, and secondly, concepts such as goal-setting, leading, team-building, and shared decision making are introduced as important aspects of

servant leadership. However, Dennis and Winston (2003), after performing a factor analysis of Page and Wong's (2000) Servant Leadership Instrument, found that only three (i.e. empowerment, service and vision) of the 12 servant leadership characteristics are significant to servant leadership. Similarly, Russell (2000) identified five functional characteristics of servant leadership as vision, appreciation of others, modelling, pioneering and empowerment. Russell and Stone (2002), like the previous servant leadership scholars, also considered additional concepts such as pioneering and modelling which were not accounted for before.

Another servant leadership conceptualization comes from Patterson (2003). She defined servant leadership by using constructs such as love, vision, trust, humility, altruism, service and empowerment. Specifically, Patterson defined servant leaders as those people who lead organizations by focusing on their followers in a way that the followers are the primary concern and the organization's concerns are secondary. Her unique contribution to the field of servant leadership has been how she introduced agapao love (i.e. the purest and highest form of love) to the main servant leadership construct to explain how servant leaders interact with and view followers. She considered love to be central to servant leadership construct because love forms the basis for the servant-hood of Jesus Christ and more importantly, Jesus has directed his disciples to love other people just as he had loved them (John 13:34, 15:9). Therefore, the leader's love goes beyond ordinarily liking someone to genuine care and compassion for followers (Winston, 2002). Dennis and Bornecea's (2005) study found empirical support for the first five Patterson's constructs. Specifically, her finding demonstrated that servant leadership significantly predicts follower OCB.

Barbuto and Wheeler (2006) are yet other significant contributors in servant leadership study. They developed five dimensions of servant leadership including calling, emotional healing, persuasive mapping, wisdom and organizational stewardship. Barbuto and Wheeler uniquely contributed to the understanding of servant leadership by innovatively framing their instruments of measuring servant leadership in a way that replication of previous instruments did not contemplate. However, their unique contribution was the addition of calling dimension, which researchers believe to be fundamental to the early Greenleaf's (1970, 1972) conceptualization of servant leadership (Hall, 2010). Barbuto and Wheeler's (2006) conceptualization identifies five servant leadership qualities: altruistic calling, emotional healing, persuasive mapping, wisdom and organizational stewardship.

Among the latest servant leadership conceptualizations are Liden *et al.* (2008) and Sendjaya, Sarros, and Santora (2008). Sendjaya *et al.* identified servant leadership with six behaviors including voluntary subordination, authentic self, covenantal relationship, responsible morality, transcendental spirituality and transforming. Their extended prior research works on servant leadership by emphasizing leader transference and moral-spiritual behaviors as fundamental pillars of servant leadership. Liden *et al.* reviewed the previous taxonomies of servant leadership and developed an instrument using nine dimensions: creating value for the community, emotional healing, conceptual skills, helping subordinates grow and succeed, putting subordinates first, empowering, behaving ethically and servant-hood. Their work is significantly different from previous conceptualizations because of the emphasis they place on personal integrity and serving all the organization's stakeholders including employees, customers, and communities. In

addition, by using the new instrument, Liden *et al*. were able to establish superiority of servant leadership over transformational leadership and LMX on predicting community citizenship behaviors, in-role performance and organizational commitment. Finally, Dierendonck and Nuijten (2011) developed and validated a multi-dimensional scale called Servant Leadership Survey (SLS) for measuring servant leadership perceptions from 1,571 sample with diverse occupational background from two countries i.e. the Netherlands and the UK. Results from a combined exploratory and confirmatory factor analysis approaches revealed eight factors measured by 30 items.

In sum, it can be concluded that servant leadership is conceptualized using a wide range of characteristics. The numerous characteristics used to conceptualize servant leadership indicate that no single servant leader could possibly attain all the characteristics. Thus, theoretical conceptualization of servant leadership construct depends on the theoretical explications by the researcher and the contexts of a particular research, both in terms of culture, and setting.

This study has chosen Liden *et al*.'s (2008) servant leadership conceptualization because of its broader and richer perspective in conceptualizing servant leadership. In particular, they were able to prioritize and emphasize a leader's personal integrity and service to all the organization's stakeholders including employees, customers, and communities.

Table 2.5 below presents summary of servant leadership models. Next sections discussed the relationship between servant leadership models and OCB.

**Table 2.5**

*Summary of Servant Leadership Models*

| Farling *et al.* (1999) | Laub (1999) | Page & Wong (2000) | Russell (2000) | Patterson (2003) | Barbuto & Wheeler (2006) | Sendjaya *et al.* (2008) | Liden *et al.* (2008) | Dierendonck, & Nuijten (2011). |
|---|---|---|---|---|---|---|---|---|
| Vision | Values people | Integrity | Vision | Agapao love | Altruistic calling | Voluntary subordination | Emotional healing | Standing back |
| Influence | Develops people | Humility | Modelling | Humility | Emotional healing | Authentic self | Creating value for the community | Empowerment |
| Credibility | Builds community | Servant-hood | Pioneering | Altruism | Persuasive mapping | Covenantal relationship | Conceptual skills | Accountability |
| Trust | Displays authenticity | Caring for others | Appreciation of others | Vision | Wisdom | Responsible morality | Empowering | Forgiveness |
| Service | Provides leadership | Developing others | Empowerment | Trust | Organizational steward-ship | Transcendental spirituality | Helping subordinates grow and succeed | Courage |
| | Shares leadership | Empowering others | | Empowerment | | Transforming | Putting subordinates first | Authenticity |
| | | Visioning | | Service | | | Behaving ethically | Humility |
| | | Goal-setting | | | | | | Stewardship |
| | | Leading | | | | | | |
| | | Team-building | | | | | | |
| | | Shared decision making | | | | | | |

**Source: The Researcher**

### 2.7.2.4.3    Servant Leadership and OCB Relationship

A few studies have investigated the relationships between servant leadership and OCB (Ehrhart, 2004; Güçel & Begeç, 2012; Hu & Liden, 2011; Hunter *et al*., 2013; Liden *et al*., 2008; Vondey, 2010; Neubert *et al*., 2008). Ehrhart (2004) was the first to examine servant leadership and OCB among 298 employees of grocery departmental stores in the USA. He has tested a model in which perception of procedural justice climate was hypothesized as a mediator between servant leadership and OCB. He revealed an indirect significant relationship between servant leadership and OCB through the mediating effect of procedural justice climate.

Neubert *et al*. (2008) also conducted another servant leadership-OCB study by examining the mediating effects regulatory focus has on the relationship between servant leadership and OCB among 229 full time US workers including loan underwriters, first-grade teachers, and accountants. They examined two leadership styles (i.e. initiating structure and servant leadership) and their relationship with OCB through the influence of regulatory focus. Among other things, the results demonstrated that servant leadership through regulatory focus has significant positive effects on OCB. Further, the results showed significant differential effects on OCB; servant leadership influences helping and creative behaviors more than initiating structure.

Liden *et al*. (2008) provided additional empirical evidence about the relationship between servant leadership and employee citizenship behaviors by using a sample of 298 students from a Midwestern university in the USA. They

demonstrated that servant leadership at individual level makes a unique contribution beyond transformational leadership and LMX in explaining community citizenship behaviors. The results confirmed Graham's (1991) claim on the difference between servant leadership, transformational leadership and LMX. Servant leadership uniquely explained community citizenship, in-role performance and organizational commitment, suggesting that such leadership exhibits an active concern for the well-being of broader organizational constituencies and the community at large.

Important to this study is the work of Walumbwa *et al.* (2010), who conducted a dyadic servant leadership-OCB study among 815 employees of seven multinational companies in Kenya. They examined the extent to which employee attitudes including affective commitment to the supervisor and self-efficacy and two specific group climates namely procedural justice climate and service climate, mediate the relationship between servant leadership and OCB. Results demonstrated support for indirect significant positive effect of servant leadership on OCB. Their study represents a significant contribution to the literature by demonstrating the ability of servant leadership to influence commitment to the supervisor, self-efficacy, procedural justice climate and service climate, which ultimately motivate employee OCBs. However, the study, like other servant leadership-OCB studies, is not without some limitations. A major weakness of the study is limited generalization as all the samples used were drawn from multinational companies. So, the findings may not be relevant to explain the relationship between servant leadership and organizational citizenship behaviour (OCB) in indigenous and public organizations. Thus, similar studies are needed in different work settings and cultural contexts. Against this background, Walumbwa

*et al*. (2010) themselves stressed the need for a similar study in different organizational and cultural settings for better understanding of the processes and conditions in which servant leaders are more or less effective in influencing employee OCB.

Another servant leadership-OCB study was conducted by Vondey (2010) with a sample of 114 that cut across various industries in the United States to investigate the moderating role of person-organization fit and organizational identification on the relationship between servant leadership and OCB. The findings revealed a direct but partial effect of servant leadership on employee OCB. Furthermore, findings demonstrated positive moderating effects of person-organization fit and organizational identification on the relationship between servant leadership and OCB. One of Vondey's (2010) limitation is regarding the use of servant leadership instruments by considering only four items of Liden *et al*. (2008) 28 items. In order to address this weakness, Vondey himself suggested that future studies apply Liden *et al*.'s instrument holistically.

Hu and Liden (2011) studied the moderating strength of servant leadership on the relationship between goal, process clarity and team potency, team performance, and team OCB. They demonstrated that servant leadership strongly moderates the relationships between goal, process clarity and team potency, team performance and team OCB. This study is important to both practice and research because it provided a new critical role of servant leadership for building effective team OCBs.

Recently, Dierendonck and Nuijten (2011) conducted an open online servant leadership survey among 135 participants from the Netherlands with a view to

develop a new servant leadership instrument as well testing its psychometric power to predict some follower outcomes. Findings revealed eight dimensions with a total of 30 items. The dimensions include standing back, empowerment, accountability, forgiveness, courage, authenticity, humility and stewardship. More importantly, the result demonstrated that servant leadership significantly predicts follower OCB. More specifically, the accountability dimension of the servant leadership showed a moderately strong relationship with civic virtue dimension of OCB. In addition, humility dimension of servant leadership showed a moderately strong effect on civic virtue, altruism and taking charge dimensions of the OCB constructs. Interestingly, the results further demonstrated that as the leader becomes more forgiving, the followers decrease their engagements in political activities of the organization.

Additionally, Güçel and Begeç (2012) investigated 67 administrative and faculty members of a private university in Turkey with the aim of finding the effects of servant leadership on OCBs. The results demonstrated that vision and serve dimensions of the servant leadership construct have positive significant effect on sportsmanship and civic virtue dimensions of OCB. More recently, Hunter *et al*. (2013) investigated 337 employees from US based retail stores to find the effect of agreeableness, extraversion, servant leadership and service climate at both the individual and group level, on followers' helping behaviour, and turnover intentions. Results demonstrated both direct and indirect significant positive effect of servant leadership on task-focused OCB-I. Specifically, the results demonstrated the impact of unit-level servant leadership on promoting helping behaviour among subordinates through the positive effect of service climate. Critically, apart from

development of new servant leadership measures, this study has offered a little contribution to the literature as the effect of servant leadership on OCB through service climate were earlier investigated by Walumbwa (2010). However, it can still be considered useful because it has provided additional validating evidence about the indirect effect of servant leadership on OCB in a newer context (US).

Although previous studies have examined the indirect relationship between servant leadership and organizational citizenship behaviour (Ehrhart, 2004; Hunter *et al*., 2013; Walumbwa *et al*., 2010), more empirical studies are needed to explain the influencing effect of other mediating mechanisms for enhanced OCB. Walumbwa *et al*. (2010) recommended for further servant leadership-OCB research to consider the processes and conditions under which servant leadership would be more effective. Similarly, Vondey (2010) called for continuous research on leader-follower relationship that could lead to broadening of people's understanding of the unique and valuable contribution followers could make to organizations. Organ *et al*. (2006) further stated "future research on the mechanism through which servant leadership influences organizational citizenship behaviour (OCB) is warranted" (p. 107). In line with these suggestions, the current study proposes to test the mediating effect of psychological ownership on the relationship between servant leadership and OCB.

The following sections discuss the mediator variable of psychological ownership as a potential generative mechanism that links servant leadership and OCB.

### 2.7.2.5 Psychological Ownership: General Overview

Brown (1989) argues that psychological ownership is an important factor for organizational competitiveness. It has been theorized that formal ownership might result in positive attitudes and behaviors through psychologically experienced ownership (Pierce, Rubenfeld, & Morgan, 1991). In addition, it is suggested that the psychological sense of ownership may be an integral part of individual employee's relationship with the organization (Kubzansky & Druskat, 1993).

Early insights into the psychological ownership construct can be traced to some literatures in the fields of psychology, philosophy, sociology and human development (Pierce *et al*., 2001). Notable among these works include work on the self and non-self region (James, 1890; Prelinger, 1959), work on the objective and subjective aspects of ownership (Etzioni, 1991), work on the development of attitudes of ownership toward objects within the self region (Heider, 1958); and other works on the psychology of mine (Csikszentmihalyi & Rochberg-Halton, 1981; Litwinski, 1947).

Literature indicates that the phenomenon of psychological ownership has been documented philosophically, clinically and empirically, suggesting that the psychology of possession is well rooted in the hearts of people and, therefore, has a universal feature. Accordingly, Dittmar (1992) argued that it is common for individuals to psychologically experience the connection between self and various targets of possession such as home or car. Possessions play an important role in the individual owner's identity that the possessions become part of the extended self for the individual owner (Belk, 1988; Dittmar, 1992). Similarly, Sartre (1969) argued that to have is one of the three categories of an individual existence and that the

totality of an individual's possessions represents the totality of the individual's being, and that an individual is what he/she has; what is his/hers is he/she. In the same fashion, James (1890) posited that an individual's self is the sum total of all that the individual calls his/hers that include not only his/her body and his/her psychic powers, but his/her life partner and children, his/her piece of land and all that belongs to him/her. Although ownership is commonly experienced toward a physical object, ownership can also be felt toward non-physical objects such as artistic creations, ideas and other people (Heider, 1958; Isaacs, 1933). In addition, feelings of ownership create important psychological and behavioural impacts on the individuals experiencing it. An increase in possessions for an individual produces a positive and uplifting effects (Formanek, 1991), whereas the loss of possessions creates "decrease of a person's personality and conversion from what the person was known as to the nothingness" (James, 1890, p. 178).

In sum, both research and social practice have demonstrated the presence of psychological ownership in three different ways: (1) experiencing the sense of ownership is part and parcel of human existence; (2) people experience sense of ownership toward so many things, living and non-living (i.e. material and immaterial); and (3) the sense or feeling of ownership has important emotional, psychological, behavioural consequences. The following sections review conceptualizations of psychological ownership and extant literature of psychology of ownership.

### 2.7.2.5.1    Conceptualizing Psychological Ownership

The discussion about the roots or sources of psychological ownership has started when Pierce *et al.* (2001) were trying to address the question "What is the motivation or function served for the individual by psychological ownership?" In attempts to answer the question, some people relate the existence of psychological ownership to an individual's genetic structure, indicating that individuals have an innate need to possess and the instinct is exhibited by almost all human beings (Burk, 1900; Darling, 1937; McDougall, 1923; Kline & France, 1899; Porteous, 1976; Weil, 1952). Yet, other people such as human development scholars have focused on nurturance (Beaglehole, 1932; Furby, 1978; Lewis & Brook, 1974; Seligman, 1975), suggesting that ownership and its accompanying psychological state are things that are learned by individuals in their early development process.

Regarding this argument, Pierce *et al.* (2001) argues that both genetic factors and experiences are important in making psychological ownership. Thus, concurring with Dittmar (1992), who proposed that psychological ownership emerges to satisfy certain human motives that are partly genetic and partly social in nature. Drawing from previous works, Pierce *et al.* (2001) suggest that the roots of psychological ownership are found in three main motives: (1) efficacy and effectance; (2) self-identity; and (3) having a place. These roots of psychological ownership are described briefly in the following paragraph.

Firstly, efficacy/effectance is defined as the need of individuals to favourably transform their environment in order to produce desired outcomes is called efficacy/effectance (Pierce *et al.*, 2001, 2003). It is the belief that people have about their ability to successfully implement a particular task, project, or an action

and become successful with it (Bandura, 1997). Self-efficacy/effectance allows individuals to satisfy their genetic need to be efficacious (Beggan, 1991; Furby, 1978; White, 1959). It has also been identified as an important factor that can lead to psychological ownership (Ikävalko, Pihkal, & Kraus, 2010). Secondly, self-identity is defined as perception that an individual has of himself/herself and the processes by which this inward perception influences his/her interaction with society (Shamir, 1991). Dittmar (1992) argues that it is through possession and the reflection upon its meaning, that an individual sense of identity and self-definition are established, maintained, reproduced and transformed. Thirdly, having a place refers to individual's motive to possess a certain space, territory or more specifically "home" in which to dwell (Pierce *et al*. 2001). Essentially, to have a place or home is, in part, responsible for individuals to like to possess some objects (Pierce *et al*., 2001), and hence the objects automatically become part of the individuals' identity, or extended self (Ikävalko *et al*, 2010). Pierce *et al*. (2003) suggested that the three roots of psychological ownership are not totally independent of one another and, therefore, one may lead to another. Thus, ownership feelings may emerge as the result of any of the "roots".

### 2.7.2.5.2 Routes to Psychological Ownership

Previous section addresses the issue of why psychological ownership exists. This section examines how employees come to actually feel this ownership. Pierce *et al*. (2001) identified three major interrelated mechanisms or routes through which psychological ownership is experienced. They consist of controlling the target, coming to intimately know the target and investing the self into the target. These

three interrelated routes of psychological ownership are described briefly in the following paragraphs.

Relevant to controlling the target, Rudmin and Berry (1987) demonstrated that ownership fundamentally means an individual's ability to use and control the use of a particular object. In addition, many other studies (Csikszentmihalyi & Rochberg-Halton, 1981; Dixon & Street, 1957; Sartre, 1969; Tuan, 1984; White, 1959) indicated that control that is exercised over an object eventually leads to feelings of ownership toward that object. Other studies demonstrated that just like parts of the human body, objects that an individual can control is regarded as part of the self (McClelland, 1951), and the higher the of control, the more the object being controlled is regarded as part of the self (Ellwood, 1927; Furby, 1978; Prelinger, 1959). Contrarily, objects that are uncontrollable or that are only controlled by others are not considered as part of the self (Lewis & Brook, 1974; Seligman, 1975). Against this background, Pierce *et al.* (2001) proposed positive and causal relationship between the amount of control job holders have over some organizational objects and the degree of ownership the job holders feel toward those objects.

Regarding to coming to intimately know the target as another route of psychological ownership, Beggan and Brown (1994) argued that close interaction with an object is central to ownership, so much so that ownership is frequently inferred when close association between an individual and an object is observed. Similarly, James (1890) demonstrated that an individual develops feelings of ownership toward particular object through a living relationship with the object. Moreover, Beaglehole (1932) also demonstrated that through intimate or close

knowledge of a person, or a place, or an object, a fusion of the self with the object automatically takes place. Hence, people can naturally feel that an object is their own simply because they become associated and familiar with it. Against this background, Pierce and colleagues (2001) proposed that a positive and causal relationship exist between the employee's intimate knowledge about a particular organizational factor and the degree of ownership feelings by the employee toward that factor.

Finally, investing the self into the target is another causal determinant factor for the existence of psychological ownership in organization (Pierce *et al.*, 2001). Important to this assertion, Locke (1690) expressed that employees own their labour and, therefore, often feel they own that which they create, produce or shape there from. In the same vein, Marx (1976) argued that through their own labour employees invest psychic energy into the products they produce as a result of which these products become representations of themselves, much like their thoughts, words and emotions. Hence, logically individual employees own the objects they have produced in much the same manner they own themselves (Durkheim, 1957). Therefore, investment of one self's energy, effort, time and attention into building particular objects makes the self become one with the object and consequently create feelings of ownership toward that object (Csikszentmihalyi & Rochberg-Halton, 1981). Thus, following all these arguments, Pierce *et al.* (2001) proposed a positive and causal relationship between an employee's level of personal investment into a potential target of ownership and the level of ownership the employee feels toward that target. Importantly, Pierce *et al.* (2003) suggested that the three routes to psychological ownership comprising control, intimate knowing

and investment of self are different, complementary and additive in nature. That is, any single route can create feelings of ownership within an individual independent of the other routes. However, the feelings of ownership toward an object will be stronger when an individual has come to experience the psychological ownership as a result of travelling multiple routes (e.g., intimate knowing, controlling and investing oneself) rather than just one route. In addition, Pierce *et al.* (2003) argued that the routes have no multiplicative relationship, which implies that if any one of the routes does not occur, ownership feelings will not emerge.

### 2.7.2.5.3    PO: A Newer Conceptualization

In an attempt to provide a broader and enriched framework for understanding psychological ownership, Avey *et al.* (2009) classified psychological ownership into two major categories consisting of promotion-orientated and prevention orientated. Promotion-orientated psychological ownership consists of four dimensions: self-efficacy, sense of belongingness, accountability and self-identity. Prevention-orientated psychological ownership only has one dimension, that is, territoriality. Avey *et al.* borrowed much from the work of Pierce *et al.* (2001), as only accountability and territoriality dimensions are new from what Pierce *et al.* (2001) presented as the sources and routes of psychological ownership.

Accountability, a popular concept in public and business domains, is considered an important aspect of psychological ownership (Avey *et al.*, 2009). Accountability is defined as ''the implicit or explicit expectation that one may be called on to justify one's beliefs, feelings and actions to others'' (Lerner & Tetlock, 1999, p. 255). Avey *et al.* theoretically considered accountability to be a component

of psychological ownership primarily by using two mechanisms: (1) the expectation (right) to hold others accountable and (2) the expectation to be held accountable by others. Firstly, Avey *et al*. argued that people who experience high psychological ownership are expected to call others to account for influences on their target of ownership. In other words, people who experience high psychological ownership expect information from people who interact with their objects of ownership, as well they expect request for permission to influence the direction of the ownership objects. Expectations of the perceived right to hold others accountable and to hold one's self-accountable as synthesized by Avey *et al*.'s conceptualization is consistent with Pierce *et al*.'s (2003) analysis of expected rights and responsibilities. Secondly, Avey *et al*. argued that people who experience high psychological ownership not only have expected rights about holding other people accountable, they also have expected responsibilities for the self (i.e., sense of burden sharing). When an object of ownership is considered as an extension of the self, accountability for what happens to it has implications for what happens to the self. This description is analogous to Pierce *et al*.'s (2003) stewardship and self-sacrifice to describe those with high levels of psychological ownership.

Territoriality is considered an important aspect of psychological ownership in organizations (Avey *et al*., 2009). In line with this, Brown *et al*. (2005) stressed that employees could become territorial over ideas, relationships, roles, physical spaces and other potential possessions in their organizations. When people form bonds of ownership over some specified targets in the organization such as physical, informational or social objects, they seek to mark those objects as belonging exclusively to themselves. Therefore, if individuals notice or anticipate

encroachment on their targets of ownership, they are likely to engage in protective territoriality in order to maintain levels of ownership as well as to communicate ownership status to potential threats and the social environment as a whole. Territoriality leads individuals to be too preoccupied with their objects of ownership, to the detriment of their actual performance or other pro-social behaviors (Avey *et al.*, 2009). Avey *et al.* further argue that fear of losing individual's territory is likely to prohibit transparency, collaboration, information sharing and politicking. Despite the potentially negative effects of preventive territorial ownership, it is also possible that a feeling of territoriality is likely to promote positive organizational effects (Avey *et al.*, 2009). Moreover, Altman (1975) believed that territoriality can result in enhanced performance and retention if an individual believes by protecting the territory he/she is doing what's right.

This study adopts Pierce *et al.*'s (2001) conceptualization of psychological ownership. They defined psychological ownership as the "state in which individuals feel as though the target of ownership (material or immaterial in nature) or a piece of it is theirs" (i.e., "It is mine!"). Pierce *et al.*'s (2001, 2003) conceptualization of psychological ownership offers a good cognitive-affective representation of ownership feelings workers express toward organizational targets of ownership and has formed the basis for general description of psychological ownership concept in the literature (Avey *et al.*, 2009; O'Driscoll *et al.*, 2006; Pierce *et al.*, 2003, 2004).

### 2.7.2.5.4 Distinctiveness of PO from Related Constructs

Pierce *et al.* (2001) expressed concern about conceptual similarity of psychological ownership with some constructs such as organizational commitment, organizational

identification, internalization, psychological empowerment and job involvement, as the constructs seem to indicate a sense of attachment to or resonance with organization (Morrow, 1983). Organizational commitment refers to beliefs and feelings rationale employees want to remain with particular organizations (Meyer & Allen, 1991). Organizational identification is defined as a perceived oneness with an organization, and experiencing that both organization's success and failure are one's own (Dutton, Dukerich, & Harquil, 1994; Mael & Ashforth, 1992). Internalization is an employee's act of incorporating the organizational values and assumptions with the self for guiding the conduct of the employee (Mael & Ashforth, 1992). Job involvement is the degree to which an employee is cognitively preoccupied with, engaged in and become concerned with his/her present job (Paullay *et al*., 1994). Finally, psychological empowerment occurs when an individual feels intrinsically motivated because he/she experiences meaning; competence, self-determination and impact in his/her job (Spreitzer, 1995).

But according to Pierce *et al*. (2001), commitment, identification and internalization are constructs that describe different types of psychological relationships with organizations but coexist with psychological ownership especially when the object of ownership is the whole organization or a central component of the organization. They further added that even though commitment, identification and internalization are neither necessary nor preconditions for psychological ownership, they are likely to have a reciprocal relationship with psychological ownership. They argued that psychological ownership can be differentiated from other "similar" constructs by their conceptual core, motivational

101

bases, development, type of state represented, associated rights and responsibilities and consequences, as summarized in Table 2.6.

Pierce *et al*. (2001) offered the distinctions between psychological ownership and the above constructs as follows: (1) Psychological ownership (i.e., possessiveness or feeling that something is mine or ours) is fundamentally different from wanting, needing or feeling obliged to maintain membership in a particular organization (i.e., organizational commitment [Meyer & Allen, 1991]); (2) Psychological ownership is fundamentally different from using a distinctive and admired characteristic of the organization to define oneself (i.e., organizational identification [Mael & Tetrick, 1992]), and (3) from association with an organization because of goal congruence (i.e., internalization [O'Reilly& Chatman, 1986]); (4) Psychological ownership as fundamentally characterized by sense of possession is also different from having a positive and pleasurable mood that originates from appraising the job as providing valued outcomes (i.e., job satisfaction [Locke, 1976]); (5) Psychological ownership is fundamentally different from being consumed by one's job and having the job as a central life interest (i.e., job involvement [Lawler & Hall, 1970]); and (6) Psychological ownership is fundamentally different from being intrinsically motivated because one experiences meaning, competence, self-determination, and impact in one's job (i.e., psychological empowerment [Spreitzer, 1995]).

Furthermore, the difference between psychological ownership and other constructs depends on the focus or question answered by each relationship (Pierce, 2004). The following shows the different question that each construct essentially attempts to answer:

a. Psychological ownership - "How much do I feel this object is mine?"

b. Organizational commitment - "Should I continue my membership with this organization and why?"

c. Organizational identification - "Who am I?"

d. Internalization - "What do I believe?"

e. Job satisfaction responds to the question "How do I feel about my job?"

f. Job involvement - "How important is the job and job performance to my self-image?"

g. Psychological empowerment - "Do I feel able to effectively shape my work role and context?"

**Table 2.6**

*Comparing Psychological Ownership to Similar Constructs*

| Constructs and dimensions of distinctiveness | Conceptual core | Questions of employees | Motivational bases | Development | Type of state | Select consequences | Rights |
|---|---|---|---|---|---|---|---|
| Psychological ownership | Possessiveness | What do I feel is mine? | Efficacy, self-identity, need for place. | Active imposition of self on organization | Affective or cognitive | Rights and responsibilities, promotion of, or resistance to change, frustration, stress, refusal to share, worker, integration, alienation, stewardship and (OCB). | Right to information, right to voice. |
| Commitment | Desire to remain affiliated | Should I maintain member-ship? | Security, belongingness, beliefs and values. | Decision to maintain membership | Affective | OCB, intention to leave, attendance. | None |
| Identification | Use elements of organization's identity to define oneself | What am I? | Attractions, affiliation, self-improvement, holism. | Categorization of self with organization, affiliation, emulation. | Cognitive or perceptual | Support for organization and participation in activities, intention to remain, frustration or stress, alienation performance, well-being of employees. | None |
| Internalization | Shared goals or values | What do I believe? | Need to be right, beliefs and values. | Adoption of organization's goals or values | Cognitive or objective | OCB, intention to leave, in-role behavior. | None |
| Psychological empowerment | Achieve orientation to work role | Can I shape my work role and context? | Self-efficacy, self-esteem, access to information (mission and performance), rewards. | Value work in terms of ideas and standards, believe in competence, autonomy, effect on outcomes. | Affective or perceptual, cognitive. | Effectiveness – role performance, concentration, resilience, innovations and behavior. | Meaningful work, access to information rewards, recognizes contributions of people. |
| Job involvement | Psychological identification with one's job | How important is my job to me? | Importance of work to self-concept, satisfy need for self-esteem. | Psychological importance at work, job situation is central to people and their identities | Affective or attitude, self-perceived. | Intrinsic motivation, concern for welfare of organization, intention to remain low level of absence. | Meaningful work, adequacy of supervision |

**Source: The Researcher**

104

Having examined the differences between psychological ownership, and the related constructs, the next section presents a brief summary of the antecedents and consequences of psychological ownership.

### 2.7.2.5.5 PO: Antecedents and Consequences

Antecedents of psychological ownership include employee participation in profit sharing, decision making and access to business (Chi & Han, 2008); ownership beliefs (Wagner, Packer, & Christiansen, 2003); ownership of the non-brand-specified complementary assets (Hou, Hsu, & Wu, 2009); stock ownership (Warren, Chiu, Hui, & Lai, 2007) and five core job design characteristics − task variety, task identity, significance, autonomy and feedback (Pierce, Jussila, & Cummings, 2009).

Furthermore, literatures reveal consequences of psychological ownership to include strategic behaviour (Ikävalko, Pihkala, & Kraus, 2010), students' learning and satisfaction (Caspi & Blau, 2011; Wood, 2003), organizational commitment and brand diffusion (Hou, Hsu, & Wu, 2009); autonomy, experienced control and work environment structure (Mayhew *et al*., 2007), job commitment, job satisfaction and general performance (Md-Sidin, Sambasivan, & Muniandy, 2010), organizational competitiveness (Brown, 1989), successful turnaround (Peters, 1988), employee's relationship with the organization (Kubzansky & Druskat, 1993), and resistance to change (Dirks *et al*., 1996).

Importantly, psychological ownership, as seen from the above results of the literature review, has received wider research interest in different ways. Moreover, the results of literature review has extolled the significant role psychological

ownership plays in producing positive impacts both around the individual employee (Caspi & Blau, 2011; Mayhew *et al*., 2007; Wood, 2003) and around the organization as a whole (Dirks *et al*., 1996; Hou, Hsu, & Wu, 2009; Kubzansky & Druskat, 1993; Md-Sidin *et al*., 2010; Peters, 1988). Thus, the current study contributes to the literature by examining the role of servant leadership in motivating psychological ownership among employees for enhanced employee OCB.

Having examined the theoretical background and conceptualizations of psychological ownership, the researcher presents evidence of the relationship between psychological ownership and OCB in the following sections.


### 2.7.2.5.6     PO and OCB Empirical Relationship

Vandewalle *et al*. (1995) conducted a study to establish the empirical relationship between psychological ownership and OCB among 797 US cooperative organization members. Results demonstrated that psychological ownership significantly and strongly predicts extra role behaviour (OCB). In addition, the results demonstrated superiority of psychological ownership over satisfaction in predicting the extra role behaviour (OCB). Furthermore, the results also revealed significant mediated effect of organizational commitment on the hypothesized relationship between psychological ownership and extra role behaviour (OCB). Despite the contribution of Vandewalle *et al*., their findings have limited validity in other sectors such as for-profit and public sector work settings. Hence, Vandewalle *et al*. suggested future study to: (1) investigate the antecedent of psychological

ownership; (2) conduct similar study in different work settings such as public sector, or for-profit organizations.

Van Dyne and Pierce (2004) conducted a study using over 800 US subordinates and supervisors to (1) examine the relationships of psychological ownership with employee attitudes including organizational commitment, job satisfaction and organization-based self-esteem; and (2) investigate relationships between psychological ownership and work behaviour including performance and organizational citizenship. They demonstrated that significant positive links exist between psychological ownership and work behaviour including organizational citizenship and performance. Mayhew *et al*. (2007) also made their contributions to theory development around subject-matter of psychological ownership for the organization. Their study used 85 respondents mainly subordinates and a few supervisors from two branches of US based accounting firm to demonstrate the distinctiveness of psychological from related work attitudes, namely job satisfaction and organizational commitment and to investigate the consequences of psychological ownership on positive organizational outcomes, namely, in-role and extra-role behaviors. Findings revealed that both forms of psychological ownership (i.e., job-based and organization-based) do not have significant influence on helping or voice extra-role behaviour (OCB). This finding is unexpected, considering that previous studies found significant relationship between psychological ownership and citizenship behaviors (Vandewalle *et al*., 1995; Van Dyne & Pierce, 2004). On a broader perspective, Vandewalle *et al*. (1995) demonstrated significant relationship between psychological ownership and general extra-role behaviour. More specifically, Van Dyne and Pierce (2004) demonstrated significant

relationship between organization-based psychological ownership and OCB. Similar result was reported by Avey *et al*. (2009) using a sample of 283 full-time employees of a metallic plating manufacturing organization based in the United States. Results demonstrated significant relationships between promotive psychological ownership and OCB-I and OCB-O, employee commitment, job satisfaction, intentions to stay and workplace deviance. Promotive psychological ownership consists of four distinct dimensions: self efficacy, accountability, sense of belongingness and self identity. They also observed that transformational leadership influences psychological ownership. In light of their findings, Avey and his colleagues suggested future research to explore other antecedents of psychological ownership factors, thus providing a good basis for the current study to explore potentiality of servant leadership as an antecedent of psychological ownership.

Recently, Chang, Chiang, and Han (2012) examined the process of internal brand management responsible for employees' identification with the corporate brand and consequent positive attitudes and behaviors that ultimately contribute to customer satisfaction. Using multilevel research of collecting data from samples including 453 employees, 172 supervisors and 933 customers from 26 hotels in Taiwan, the researchers investigated the interactions among brand-centered HRM, brand psychological ownership among employees and employee brand citizenship behaviors. Results from the hierarchical linear modeling demonstrated that brand psychological ownership experienced by employees has positive effects on employee brand citizenship behaviors. Furthermore, results at the cross level demonstrated that employee brand psychological ownership partially mediates the

relationship between brand-centered HRM and employee brand citizenship behaviors.

Next, justifications for psychological ownership as a mediating construct for investigation in this study are offered.

### 2.7.2.5.7    Psychological Ownership as Potential Mediator

In the present study, psychological ownership is introduced as a mediating variable which intervenes on the relationship between servant leadership and OCB. Previous studies have examined the relationship between psychological ownership and OCB (Avey *et al*., 2009; Mayhew *et al*., 2007; Van dyne & Pierce, 2004; Vandewalle *et al*., 1995), but they only used psychological ownership as a predictor variable of OCB. To date, no study has considered psychological ownership as a mechanism for enhancing the effect of servant leadership on OCB.

To justify the potential role of psychological ownership as a mediator, the proposition by Pierce *et al*. (2001, 2003) is invoked. They proposed that psychological ownership would be the critical psychological state that mediates the effects of job design upon individual and work outcomes. Job design is basically aimed at achieving both organization's and individual's objectives (Hackman & Oldham, 1970). Because servant leaders are egalitarian, ethical and concerned for personal success and prosperity of their organizations (Greenleaf (1970), it is right to imply that they will be more concerned about balanced efficient and effective design of job. Thus, it can be postulated that psychological ownership can be used as a mediating variable between servant leadership and OCB.

Next arguments for suggesting the mediating potential of psychological ownership in the current study are the works of Vandewalle *et al.* (1995) and Mayhew *et al.* (2007). In their work where they investigated the direct effects of psychological ownership on work outcomes including job satisfaction, organizational commitment and OCB, Vandewalle *et al.* recommended that future researchers should focus on finding antecedents of psychological ownership because they found that psychological ownership significantly influences OCB and is superior to satisfaction in predicting the OCB. Similar recommendation was also offered by Mayhew *et al.*'s (2007) where they suggested that future studies should address individual factors that may influence the development of psychological ownership.

Moreover, this mediational proposition could be supported by social exchange (Blau, 1964) and social learning (Bandura, 1977) theories. In the case of social exchange theory (Blau, 1964), supervisor's concern for development and success of subordinates (servant leadership), could develop the feeling of ownership for the organization (psychological ownership) as an exchange for supervisor's positive behaviors, which may ultimately motivate performance of OCB. Therefore, employee OCB can be as a result of satisfaction with organizational leadership style and the sense of ownership for the organization employees experience in the course of their normal day-to-day relationships with supervisors.

Similarly, regarding to the social learning theory (Bandura, 1977) which states that individuals learn their attitudes and behaviors from the environment, followers learn from and imitate their leaders. Particularly, because servant leaders serve as model to followers (Greenfield, 1972), they tend to attract followers to the

extent that their behaviour is readily observed and likely to be imitated (Wood & Bandura, 1989). Thus, reference to the reviewed literature and a synthesis that followed, the mediating potentiality of psychological ownership on the relationship between servant leadership and OCB is established.

## 2.8    Summary

The literature review reveals that employee OCB is critical to organizational life and survival. OCB includes all voluntary positive employee behaviors that involve helping co-workers, supervisors and organization. OCB is discretionary and non-mandatory because the organizations do not have the right to force employees to exhibit OCB. Similarly, employers do not have the right to punish employees if they fail to display OCB. In addition, employee OCB is not formally rewarded. Employees perform them because of their willingness and sincerity to contribute to the organizations in which they are members where the employees, supervisors and organization engage in social exchanges.

Previous studies demonstrated that OCB has many antecedents. OCB was empirically shown to be influenced by four major variables namely individual characteristics, task characteristics, organizational characteristics, and leadership behaviors. Among OCB antecedents, leadership behaviour is most closely related to influencing OCB. One of the leadership behaviors is servant leadership. Servant leadership is concerned with leader's genuine interest and concern on treating employees as well as all other organizational stakeholders' interests first. Servant leaders are sensitive to the needs of all stakeholders.

Though the study of servant leadership started in early 1970s, actual research interest started recently in early 2000s. However, results of the few previous studies indicated that servant leadership influences employee OCB indirectly. Furthermore, results revealed that servant leadership significantly and partially influences employee OCB indirectly through some mechanisms. Against this background some studies recommended future studies of servant leadership-OCB relationship to consider other mediating mechanisms for enhanced OCB to emerge. The present study intends to fill in this important gap by proposing psychological ownership as a mediator in the servant leadership-OCB link.

# CHAPTER THREE

# RESEARCH METHODOLOGY

## 3.1 Introduction

The previous chapter has discussed related literature on OCB, servant leadership, and psychological ownership. This chapter discusses research methodology and procedures undertaken by this study. Specifically, this chapter covers nature and philosophy of this study, theoretical framework, conceptual definitions, hypotheses of the study, underpinning theory, population of the study, sample size and sampling technique, data collection and data analysis techniques.

## 3.2 Nature and Philosophy of this Study

Generally, researchers have their specific worldviews about the nature of particular social reality, or knowledge based on their own philosophical paradigm, thus, linking research and philosophical orientation helps to clarify a researcher's theoretical frameworks (Cohen & Vigoda, 2000).

Positivism, subjectivism or realism advocates that research is expected to uncover an existing reality or truth in the social environment (Creswell, 1994). Additionally, positivist paradigm suggests that social phenomenon is to be treated as an entity, in as much as possible, same ways that natural scientists treat physical phenomenon (Creswell, 1994). This suggests that the researcher is expected to be independent of the research and, thus, employ techniques that maximize objectivity and minimize the influence of the researcher in the research process.

As summarized by Creswell (1994) and argued by different scholars (Crotty, 1998; Neuman, 2003; Marczyk, DeMatteo and Festinger, 2005), the positivists are of the view that: (1) empirical facts exist independently from personal views, ideas or emotions. The empirical facts are collected in a value free manner; (2) the analysis of social reality is statistical in nature; (3) empirical facts are governed by laws of cause and effect; (4) the adopted methodology is highly structured and, thus, allows for replication, whether by the same researcher, or others; (5) the social reality patterns are stable and, therefore, knowledge is additive. In line with this, the uunderpinning philosophy for this study is positivism.

Specifically, this study is a quantitative one. Quantitative research is defined as social inquiry that employs the use of empirical methods and empirical statements (Cohen, 1980). Moreover, quantitative research is defined as a type of research in which phenomena are explained by collecting and analyzing numerical data using statistically based methods (Creswell, 1994). Thus, this study is a quantitative in nature because it employed the use of measurement (i.e. the use of statistical tools) to understand relationships among servant leader behaviors, psychological ownership and OCBs. Additionally, this study is consistent with requirements for quantitative research in which social reality is objectively determined using rigid guides in the process of data collection and analysis (Creswell, 1994). This study has rigidly complied with all requirements for quantitative research as discussed in the previous sections and demonstrated in chapter 4.

## 3.2 Development of Hypotheses

With the help of the literature for this study and theoretical justifications, hypotheses for this study have been formulated for empirical testing and validation. This study has eight constructs namely emotional healing, creating value for the community, conceptual skills, helping subordinates grow and succeed and putting subordinates first as the independent variables, psychological ownership as the mediating variable, and OCB-I and OCB-O as the dependent variables. Twenty seven hypotheses were formulated for testing in this study, which were concerned with relationships between the variables.

### 3.2.1 Servant leadership and Organizational Citizenship Behaviors

Organizational citizenship behaviour is defined as "individual behaviour that is discretionary, not directly or explicitly recognized by the formal reward system and that in the aggregate promotes the effective functioning of the organization" (Organ, 1988, p. 4). Recently, organizational citizenship behaviors have been described as voluntary behaviors that transcend an employee's specified role requirements and are not formally rewarded by the organization (Organ *et al.,* 2006). Despite OCB's prominence in organization theory literature, there are many grey areas that need empirical investigation (Walumbwa *et al.*, 2010). Past research suggests that servant leadership has served as an antecedent to OCB (Ehrhart, 2004; Hu & Liden, 2011; Liden *et al.*, 2008; Vondey, 2010; Neubert *et al.*, 2008). However, the relationship between OCB and servant leadership was reported to be partial and therefore inconclusive (Vondey, 2010). Further research is important to provide more empirical validation of servant-OCB relationship.

115

Servant leadership is "an understanding and practice of leadership that places the good of those led over the self-interest of the leader, emphasizing leader behaviors that focus on follower development, and de-emphasizing glorification of the leader" (Hale & Fields, 2007, p. 397). Furthermore, servant leader emphasizes leaders' moral behaviour, protecting followers from self-interested leaders pursuing ends for their own selfish gain (Graham, 1991; Liden *et al*., 2008). Servant leaders also recognize their moral responsibility to the success of the organization as well as to the success of their subordinates, the organization's customers and other stakeholders (Ehrhart, 2004). A large number of studies on servant leadership have been undertaken to explain the principles and performance of servant leadership (Dennis & Bocarnea, 2005; Sendjaya *et al*., 2008; Geller, 2009; Han *et al*., 2010). However, only a few studies of servant leadership were related to OCB (Ehrhart, 2004; Güçel & Begeç, 2012; Hu & Liden, 2011; Hunter *et al*., 2013; Liden *et al*., 2008; Vondey, 2010; Neubert *et al*.,  2008). The present study tries to make unique contribution to the existing servant leadership-OCB literature by exploring new mechanism through which the relationship could be enhanced.

Clear understanding of servant leadership-OCB relationship is important in formulation of hypothesis for this study. Servant leadership behaviour creates a pervasive positive social context that in turn positively affects subordinates' work attitudes and behaviors. Servant leaders provides situational response-producing stimulus from which their subordinates interpret and understand their environment (Takeuchi, Chen, & Lepak, 2009), thus influencing subordinates' attitudes and behaviors in form of OCB.  The behaviour of leaders is believed to be a powerful communication of what is important and how others should behave in the

organization (Neubert *et al.*, 2008). Empirically, some studies (Bandura, 1986; Brockner & Higgins, 2001; Graham, 1991; Kark & Van Dijk, 2007) demonstrated that the behaviour of role models who are high in status or power receives particular attention and is replicated because it may be perceived as an endorsement of specific beliefs and norms regarding what are appropriate or important in the organization.

The proposed positive relationship between servant leadership and OCB is consistent with some research findings. Smith *et al.* (1983) argued that a leader serves as a model for subordinates and that social psychological studies have demonstrated that pro-social behaviors such as OCBs are influenced by models. Although these perspectives have indicated how servant leaders' behaviors toward subordinates influence subordinates, social exchange theory (Blau, 1964) explicates why subordinates respond to their leaders' behaviour. According to this theory, the quality of social interactions induces informal obligations to reciprocate favours to those who have acted in one's interest. This relationship is often depicted as a form of unspoken reciprocity in which individuals seek to repay favours until a perceived balance of exchanges exists (Blau, 1964). Servant leaders have conditioned themselves as selfless; they express genuine care and concern; and they act in the best interest of their followers, thereby creating a social context in which followers reciprocate by engaging in OCB. When servant leaders engage in selfless, supporting and developmental behaviors across all subordinates in the organization, subordinates reciprocate accordingly. More specifically, subordinates reciprocate by engaging in OCB toward the leader as a specific form of exchange. They perform OCB as a general form of exchange to support and sustain the positive social

environment in response to the leader's behaviour. Subordinates' OCB should ultimately help the leader achieve his/her own goals. On the basis of this reasoning, the following hypothesis is formulated:

*Hypothesis 1: There is a significant positive relationship between servant leadership (SL) and organizational citizenship behaviors (OCBs).*

### 3.2.2 Servant Leadership and Psychological Ownership (PO)

Psychological ownership is a state of mind in which an employee develops possessive feelings for a target (Van dyne & Pierce, 2004) such as the job (Peters & Austin, 1985), organization (Dirks, Cummings, & Pierce, 1996), the products created (Das, 1993), the practices employed by the organizations (Kostova, 1998), and specific issues in the organizations (Pratt & Dutton, 2000). Servant leadership may be an essential factor for achieving psychological ownership among employees in organizations; because a servant leader actively cares for the welfare of the workers with courage, compassion, humility and flexibility (Geller, 2009).

It may be possible for servant leadership to predict psychological ownership. Servant leader behaviour can spark the feeling of ownership of organization among employees, leading to OCB. High levels of devotion and close association with workers, investment of the leader's energy and feelings and opportunities for growth provided by the leader can create the feeling of psychological ownership among the followers. Because the servant leader wants the organization to survive and prosper he/she will create conducive environment for subordinates to feel at home and contribute optimally for organizational development. The dedication, zeal and enthusiasm for the servant leader's egalitarian approach in treating subordinates

and corporate interests suggest that the leader nurtures the feelings of ownership for the organization. Thus, because behaviour of leaders is believed to be a powerful communication of what is important and how others should behave in the organization (Neubert *et al*., 2008), subordinates may feel that they are psychologically part of the organization.

Furthermore, because servant leaders are highly egalitarian (Waterman, 2011), they are concerned about the welfare of others and provide service to all organization's stakeholders, followers may feel the urge to reciprocate by developing ownership feeling for the organization. Finally, servant leadership encourages development of psychological ownership for the organization where members are provided with numerous opportunities to exercise varying degrees of control over a number of factors. Jobs that provide greater autonomy imply higher levels of control (Hackman & Oldham, 1980), and thus increasing the likelihood that feelings of ownership toward the job and organization will emerge. Therefore, psychological ownership could be one of the expectations from workers in return for experiencing servant leadership. Generally, servant leaders, through their good deeds, may help to encourage development of psychological ownership. Leaders are often viewed as the "symbol" or "personification of the organization" (Liden, Bauer, & Erdogan, 2004) because of that subordinates may be motivated to respond to the leader's extra efforts (i.e., good deeds) by evincing ownership feeling for the organization.

Another important way through which servant leaders can aid the development of employees' psychological ownership for the organization include the satisfaction employees derive from the leader's caring and concern toward the

subordinates in the organization. In line with empirical findings that servant leadership relates to job satisfaction (Guillaume, Honeycutt, & Savage-Austin, 2013; Ikel, 2005) and motivation (Graham, 1995), it could suggest that employees may likely experience psychological ownership for the organization. This situation could be possible because of the natural human need to reciprocate good deeds (Blau, 1964). Therefore, subordinates may be motivated to respond to the leader's extra efforts (i.e., job satisfaction and motivation) by evincing ownership feeling for the organization.

Furthermore, some important mechanisms through which servant leader can promote psychological ownership consist of the way servant leader puts and promotes followers' interest in the first place (Barbuto & Wheeler, 2006; Greenleaf, 1977); they encourage followers to grow intelligently, be creative, self-manage and serve people (Han, Kakabadse, & Kakabadse, 2010). Critical observation of these findings suggests that social learning theory (Bandura, 1977) offers a useful explanation of probable positive relationship between servant leadership and psychological ownership. Social learning theory suggests that individuals learn their behaviors from the environment they interact in. Related to this, Pierce *et al*. (2003) argued that the more information an individual possesses about organization, the stronger the connection between an individual and the organization. As well, the more information is possessed about the organization by an individual, the more emotions are felt thoroughly and deeply. The fact that servant leaders encourage followers to grow intelligently, be creative, self-manage and serve people (Han, Kakabadse, & Kakabadse, 2010), it suggests that followers are likely to become psychologically attached to the organization, leading them to develop ownership

feelings for the organization. Generally, subordinate employees, through conscious or unconscious ways, may be modeling servant leaders for their ethics, egalitarian considerations, trust and helping behaviors.

Based on these arguments, the following hypothesis is formulated:

*Hypothesis 2: There is a positive significant relationship between servant leadership and psychological ownership (PO).*

### 3.2.3    Psychological Ownership and Employee OCB

Psychological ownership is a state where an individual feels as if the target of ownership or a piece of that target is his/hers (Pierce *et al*., 2001). Specifically, psychological ownership of organization represents a bonding, such that organizational members feel a sense of possessiveness toward the organization even though no legal claim exists (Vandewalle *et al*., 1995). Feelings of ownership for organization are accompanied by a felt responsibility and a sense of burden sharing for the organization (Druskat & Kubzansky, 1995; Kubzansky, & Druskat, 1993). It was found that every feeling of ownership for organization is related to commensurate or balancing responsibility for work outputs (Dipboye, 1977; Mackin, 1996), thus suggesting that with psychological ownership every positive employee behaviour is a possibility. Feelings of responsibility include a responsibility to invest one's time and energy to advance the cause of the organization, caring and nurturing important aspects of the organization (Pierce *et al*., 2001).

Wagner, Packer and Christiansen (2003) proposed that feeling of pride and concern associated with psychological ownership may lead to positive employee

attitudes. Consequently, Pierce *et al.*'s (2003) argued that psychological ownership could make employees to feel more responsible for their workplace outcomes. In a similar vein, Kubzansky and Druskat (1993) suggest that the psychological sense of ownership may be an integral part of the employee's relationship with the organization. Furthermore, it has been found that psychological ownership, as an attitudinal state, becomes attached to issues that organizational members feel worthy of attentional investment (Pratt & Dutton, 2000). Brown (1989) demonstrates that psychological ownership is a key to organization competitiveness, thus suggesting strong influence of psychological ownership on corporate mission and goals of organizations.

A few studies about psychological ownership and OCB revealed significant relationship. A high level of psychological ownership is accompanied by positive employee behaviors such as feeling of concern for product quality, customer satisfaction and working as a part of a team, as opposed to the feeling that these job-related issues are someone else's concern or problem (Parker *et al.*, 1997). Therefore, when employees feel a sense of ownership for their organization or any part there from, they can exert extra efforts and personal sacrifices to ensure the organizational interests are protected and goals achieved. Because psychological ownership is affective, it can be a good catalyst for employees to engage in positive employee behaviour such as OCB. In line with this, Van dyne and Pierce (2004) reported existence of positive links between psychological ownership for the organization, OCB, organizational commitment, job satisfaction and organization-based self-esteem. Similarly, Vandewalle, Van Dyne, and Kostova (1995) demonstrated that psychological ownership significantly and strongly predicted

extra role behaviour more than the in-role behaviour. Additionally, comparison revealed that psychological ownership demonstrated superiority over job satisfaction in predicting extra role behaviour (OCB).

Md-Sidin, Sambasivan, and Muniandy (2010) demonstrated that psychological ownership had significant and positive relations with job commitment, job satisfaction and performance. Moreover, Avey *et al*. (2009) reveal significant relationships between promotive psychological ownership and some important individual level outcomes in organizations such as the two forms of organizational citizenship behaviors (OCB-I and OCB-O). Promotive psychological ownership includes self efficacy, accountability, sense of belongingness and self identity (Avey *et al*., 2009). More recently, Chang *et al*., (2012) have demonstrated that psychological ownership for a particular product brand experienced by employees has positive effects on their citizenship behaviors toward the particular brand.

Based on the discussed theoretical and empirical literature on the consequences of psychological ownership, the following hypothesis is formulated:

*Hypothesis 3: There is a significant positive relationship between psychological ownership (PO) and organizational citizenship behaviors (OCBs).*

### 3.2.4   Psychological Ownership as Potential Mediator

Psychological ownership is a state of mind in which an employee develops possessive feelings for the target (Van dyne & Pierce, 2004). It is a possible mechanism or process to mediate the relationship between servant leadership and OCB. In the previous sections, using some past literatures (Barbuto & Wheeler,

2006; Geller, 2009; Graham, 1995; Greenleaf, 1977; Hackman & Oldham, 1980; Han *et al*., 2010; Ikel, 2005; Liden *et al*., 2004; Neubert *et al*., 2008; Takeuchi, Chen, & Lepak, 2009; Waterman, 2011), extensive discussions on the possible connection between servant leadership and psychological ownership and between psychological ownership and OCB have been offered.

Similarly, using social learning theory (Bandura, 1977) and social exchange (Blau, 1964), theoretical explications have extensively been made to establish a possible link between servant leadership and psychological ownership. Against this background it is hypothesized that:

*Hypothesis 4: Psychological ownership (PO) significantly mediates the relationship between servant leadership and organizational citizenship behaviors (OCBs).*

## 3.3 Underpinning Theories

Various theories can explain the dynamics of OCB. These theories include social exchange theory (Blau, 1964); norm of reciprocity (Gouldner, 1960); leader-member exchange (LMX) theory (Dienesch & Liden, 1986); expectancy theory (Vroom, 1964) and social learning theory (1977).

The norm of reciprocity is the social expectation that individuals will respond to each other in kind - returning benefits for benefits and responding with either indifference or hostility to harm. The social norm of reciprocity further holds that people will respond to a positive action with another positive action and will also respond to a negative action with another negative one. An underlying norm of reciprocity can therefore be a powerful engine for motivating, creating, sustaining

and regulating the cooperative behaviour required for self-sustaining social organizations. It can as well be an engine for controlling the damage toward the organization.

Leader-member exchange theory is yet another exchange theory which holds that leaders develop different quality of work relationships with different subordinates (Graen & Scandura, 1987; Scandura & Schriesheim, 1994). The theory further argues that supervisors do not use the same style in dealing with all their subordinates, but instead develop different types of relationships or exchanges. In low LMX, the relationship is strictly based on formalized employment contracts and job descriptions while in high LMX the relationship is characterized by mutual trust, emotional support, respect and reciprocal influence. Dienesch and Liden (1986) and Liden and Maslyn (1998) argued that high LMX members enjoy high exchange quality relationships characterized by liking, loyalty, professional respect, and contributory behaviors. However, it should be noted that LMX is typically measured from the subordinate perspective (Schriesheim, Castro, & Coglise, 1999). In the LMX theory, the leader-member exchange (LMX) is seen as the quality of exchange relationship between the supervisor and each of his or her subordinates (Dienesch & Liden, 1986). In a similar fashion, expectancy theory (Vroom, 1964) suggests that individuals consciously choose a particular course of action, based upon perceptions, beliefs and attitudes, as a consequence of their desires to enhance pleasure and avoid pain. Further, Porter and Lawler (1968), building on Vroom's contributions, developed a theoretical model suggesting that the expenditure of an individual effort would be determined by expectations that an outcome may be attained and the degree of value placed on outcome in the individual's mind.

### 3.3.1  Social Exchange Theory (SET)

Studies in the field of anthropology, sociology and social psychology have identified different rationales underlying social and economic exchange (Blau, 1964; Haas & Deseran, 1981; Molm, Nobuyuki, & Gretchen, 2000). Whereas economic exchange refers to the explicit and conditional trade of specified resources, social exchange implies long-term efforts to support the other party through unspecified contributions of immaterial, symbolic and personal value (Haas & Deseran, 1981). These are exchanged voluntarily and in a general expectation of reciprocity, yet are not instrumental to obtain a specific reward or advantage (Blau, 1964). Receiving contributions of social exchange creates positive affect and a moral obligation to support the donor, which is socially and psychologically sanctioned by norms of reciprocity (Gouldner, 1960). Eventually, however, the form and timing of reciprocation lies in the discretion of the receiver and cannot be enforced. As the deliberate acceptance of vulnerability, associated with making contributions the other party is only morally bound to reciprocate, trust is vital to social exchange (Haas & Deseran, 1981). Experienced states of psychological indebtedness and positive expectations of the exchange partners' intentions are both antecedents and consequences of social exchange, developing gradually when repeated interactions are perceived as balanced and fair (Molm *et al*., 2000). In a purely economic exchange, no further commitments sustain after a transaction is completed. Contrarily, successful social exchange generates "feelings of personal obligation, gratitude and trust on an ongoing basis" (Blau, 1964, p. 94).

Social exchange theory (Blau, 1964) is widely used to underpin OCB (Jawahar & Carr, 2007; Skarlicki & Latham, 1997; Zoghbi-Manrique de Lara,

2008). The fundamental basis of social exchange theory is that relationships providing more benefits than costs will yield enduring mutual trust and attraction (Blau, 1964). These social transactions encompass both material benefits (i.e. salaries, bonuses, and allowances) and psychological rewards ([status, loyalty and approval] Yukl, 1994). Central to both social exchange theory and the norm of reciprocity is the concept of unspecified obligations. Unspecified obligations denote human behaviour that when one individual party does a favour to another, there exists an expectation of some future return from the other individual party. These obligations may be enacted in the form of citizenship behaviors and over time, a pattern of reciprocity evolves, resulting in perceived balance in the exchange relationship (Blau, 1964; Gouldner, 1960; Rousseau, 1989). Citizenship behaviors are more likely to be under an individual's control and, hence, more likely to be a salient mode of reciprocation (Organ, 1990).

### 3.3.2   Social Learning Theory (SLT)

The application of social learning theory to understand motivated behavior in organizations is considerably increasing. Specifically, a number of studies have applied the theory to explain the relationship between employee OCB antecedents and actual OCB performance (Bommer, Miles, & Grover, 2003; Ehrhart & Naumann, 2004; Vigoda-Gadot *et al*., 2007). Social cognitive learning theory highlights the idea that much of human learning occurs in a social environment. By observing others, people acquire knowledge of rules, skills, strategies, beliefs and attitudes. Social learning theory states that much of human learning occurs within a particular social environment (Bandura, 1977). The theory further states that by observing others, individuals acquire beliefs, attitudes skills, strategies and

knowledge of rules. In addition, individuals learn about the importance and appropriateness of particular behaviors by observing people they consider as models and the consequences of modelled behaviors. The theory further concludes that the individuals making observation of their models then act in accordance with their beliefs concerning the expected outcomes of their actions. Social learning theory states that models are an important source for learning new behaviors and for achieving behavioural change in organizational settings (Sims & Manz, 1996).

Social learning theory states that observational learning can occur in relation to three situations, including: (1) live model in which the model demonstrates the desired behaviour; (2) verbal instruction in which the model describes the desired behaviour in detail, as well as instructing the learner how to engage in the actual behaviour; and (3) symbolic in which the learner observes and models a real or fictional character by means of the media, including, television, movies, radio, Internet and literature. Fundamental to Bandura's social learning theory is the concept of reciprocal determinism. Reciprocal determinism states that an individual's behaviour is largely influenced by characteristics of the person, person's behaviour and the environment.

Social learning theory further proposes that the modelling process involves four major steps including: (1) the learner must pay attention to the features, or behaviors of the model; (2) the learner must be able to remember details of the model's behaviour in order to later reproduce the behaviour; (3) the learner must organize his/her responses in accordance with the model's behaviour; (4) the learner must have an incentive, or motivation driving his/her reproduction of the modelled behaviour.

Social learning theory explains human behaviour as a continuous reciprocal interaction between cognitive, behavioural and environmental influences (Bandura, 1977). "…the person and the environment do not function as independent units but instead determine each other in a reciprocal manner" (Davis & Luthans, 1980, p. 282). Consistently, social learning theory emphasizes reshaping people's behaviors, values and attitudes, or changing an existing type of behaving through observation and practice (Bandura, 1977; Crittenden, 2005).

## 3.4    Theoretical Framework

Exchange relationships with the organization and with one's immediate supervisor are of great significance to subordinate employees (Jawahar & Carr, 2007). Based on social exchange theorem of unspecified obligations which is central to both the norm of reciprocity, employees' exchange relationship with the organization is influenced greatly by unspecified obligations. Some good mechanisms for these unspecified obligations to develop for employees is through servant leadership. Employee OCB can be developed as a result of beneficial leadership behaviors (servant leadership) and the sense of ownership for the organization employees experience in the course of their normal day-to-day relationships with the organization.

Similarly, social learning theory (Bandura, 1977) has been used to explain performance of OCB by some researchers (Bommer et al., 2003; Ehrhart & Naumann, 2004; Vigoda-Gadot *et al.*, 2007). SLT suggests that individuals learn by observing others' behavior (Bandura, 1977, 1986). In addition, individuals learn acceptable, normative behavior by observing how others around them behave. The

more OCB is modeled by an organizational member, the more likely the member will behave consistently with the model, especially when that behavior is associated with positive social consequences (Podsakoff & MacKenzie, 1997). Servant leadership is concerned about exhibiting emotional healing, creating value for the community, showing conceptual skills, helping subordinates grow and succeed, behaving ethically and empowering and putting subordinates first. Consistent with social learning theory (Bandura, 1977, 1986), employees can model their supervisors and learn to act in ways that benefit others, that is by performing OCB-I and OCB-O.

Specifically, because servant leaders continually strive to empower, trust, care, show accountability and ethics toward followers in the use of power (Barbuto & Wheeler, 2006; Dierendonck & Nuijten, 2011; Farling *et al.*, 1999; Liden *et al.*, 2008; Page & Wong, 2000), employees might be influenced to experience ownership for the organization and eventually OCB. In other words, because servant leaders constantly teach followers practically their ways of doing things and set perfect examples (Tureman, 2013), employees may be motivated to develop psychological ownership for their organization (Bandura, 1977, 1986). Similarly, psychological ownership is said to be evidenced by an individual's self-efficacy, sense of belongingness, accountability and self-identity (Avey, 2009). Therefore, a close examination of some of the characteristics and behaviors of servant leaders may allow for speculating the possible connection of servant leader behaviors and employees' psychological ownership for the organization.

| Servant leadership | Psychological Ownership | Organizational citizenship behavior (OCB) |
| --- | --- | --- |
| 1. Conceptual skills<br>2. Empowerment<br>3. Helping subordinates grow and succeed<br>4. Putting subordinates first<br>5. Behaving ethically<br>6. Emotional healing<br>7. Creating value for the community | | 1. OCB-I<br>2. OCB-O |
| Independent Variable | Mediating Variable | Dependent Variables |
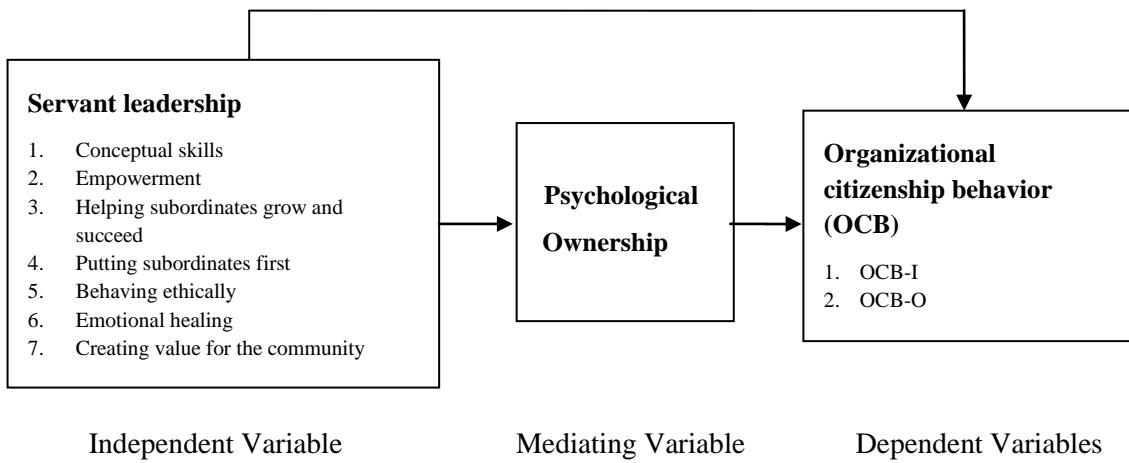
**Figure 3.1**
*Theoretical Model*

In sum, consistent with social exchange theory (1964) and social learning theory (1977, 1986), the present model of servant leadership comprising of seven dimensions as stated in Figure 3.1 is set to predict employee OCB-I and OCB-O through the influence of psychological ownership.

## 3.5    Measurements of Variables/Constructs

As depicted in Figure 3.1, the present study has three major constructs to be measured namely servant leadership, psychological ownership, and OCB. This section discusses the instruments used in measuring the constructs of the model.

## 3.5.1   Servant Leadership (SL)

Servant leadership is a leadership style where leaders place the needs of their subordinates before their own needs and centre their efforts on helping subordinates grow to reach their maximum potential and achieve optimal organizational and career success (Greenleaf, 1977). To measure SL, 28 items adopted from Liden *et al.*'s (2008) measurement scale were used. A seven-point Likert scale ranging from

131

'1' "strongly disagree" to '7' "strongly agree" was employed to measure all items. According to Liden and his colleagues, there are seven servant leadership dimensions as follows: (1) Behaving ethically: This means leader interacting openly, fairly and honestly with others. Example of items concerning behaving ethically includes: "My manager holds high ethical standards and my manager is always honest"; (2) Putting subordinates first: This means the act of using actions and words to make it clear to the immediate followers that satisfying their work needs is a priority to the leader. Example of items concerning putting subordinates first includes "My manager seems to care more about my success than his/her own and my manager puts my best interests ahead of his/her own"; (3) Helping subordinates grow and succeed: This is an act of demonstrating genuine concern for others' career growth and development by providing support and mentoring. Example of items concerning helping subordinates grow and succeed includes "My manager makes my career development a priority and my manager is interested in making sure that I achieve my career goals"; (4) Empowering: Empowering means encouraging and facilitating others, especially immediate followers, in identifying and solving problems, as well as determining when and how to complete work tasks. Example of items concerning empowering includes "My manager gives me the responsibility to make important decisions about my job and my manager encourages me to handle important work decisions on my own"; (5) Conceptual skill: This means leader's ability of possessing the knowledge of the organization and tasks at hand so as to be in a position to effectively support and assist others, especially immediate followers. Example of items concerning conceptual skills includes "My manager can tell if something is going wrong and my manager is able

to effectively think through complex problems'; (6) Creating value for the community: This servant leadership dimension refers to a conscious and genuine concern for helping the community by offering service to help them achieve their objectives. Example of items concerning creating value for the community includes "My manager emphasizes the importance of giving back to the community and my manager is always interested in helping people in our community"; and (7) Emotional healing: This dimension is concerned with supervisor's act of showing sensitivity to others' personal concerns. Example of items concerning emotional healing includes "I would seek help from my manager if I had a personal problem and my manager cares about my personal well-being."

The Liden *et al.*'s measurement scale was adopted in this study largely because the measure was reported to be the most valid instrument for measuring servant leadership considering the rigorous tests for validity and reliability it has gone through its development process (Liden *et al.*, 2008). The scale's internal reliability (i.e. Cronbach's alpha) was reported to be .89 (Liden *et al.*, 2008). Furthermore, Liden *et al.* stated that the measurement scale was carefully drawn after considering the three major pre-existing measures (Ehrhart, 2004, Barbuto & Wheeler, 2006; Page & Wong, 2000), thus emphasizing validity of the instrument. The measure was ascertained to be the most comprehensive servant leadership measure relevant in contemporary work organizations (Liden *et al.*, 2008). Furthermore, an important justification for the use of Liden *et al.*'s measurement in this study has been its growing wide acceptance in servant leadership research (Freeman, 2011; Hu & Liden, 2011; Vondey, 2010). A secondary reason for adopting the measurement may include the current study's bid to extend Vondey's

(2010) servant leadership study. Vondey (2010) who employed only four of the seven dimensions of Liden *et al.*'s instrument in his servant leadership study strongly recommended the use of the whole instrument in future research.

### 3.5.2 Psychological Ownership (PO)

Psychological ownership refers to a state of mind that employees have toward a specific object of the organization that the object or organization is "his/hers" or "theirs" (Furby, 1978; Pierce *et al.*, 1991). To measure psychological ownership for the organization, seven items adopted from Van Dyne and Pierce's (2004) were used. It has been reported that the Van Dyne and Pierce's (2004) scale internal consistency was .83 (Chi & Han, 2008). A seven-point Likert scale ranging from '1' "strongly disagree" to '7' "strongly agree" was employed to measure all the items. Example of psychological ownership scale items include: "I feel a very high degree of personal ownership for this organization", "Most of the people that work for this organization feel as though they own the company," and "This is our company."According to Van Dyne and Pierce (2004), psychological ownership is a uni-dimensional construct.

Prominent authors of psychological ownership have employed this measurement scale in their studies (Chi & Han, 2008; Hou, Hsu, & Wu, 2009; McIntyre, Srivastava, & Fuller, 2009), thus demonstrating the wider use, reliability and validity of the measurement instrument.

### 3.5.3 Organizational Citizenship Behaviour (OCB)

OCB is defined as employees' willingness to go above and beyond the prescribed roles that they have been assigned (Organ, 1990). The OCB dimensions (Williams

& Anderson, 1991) as depicted in Figure 3.1 include organizational citizenship behaviour for the individual (OCB-I) and organizational citizenship behaviour for the organization (OCB-O). The organizational citizenship behaviour for the individual (OCB-I) was operationalized as a behaviour that immediately benefits specific individual and indirectly contributes to the organization (Williams & Anderson, 1991). The OCB-I consists of behaviors directed at specific individuals in the organization, such as, courtesy and altruism. Example of items concerning this dimension includes "I help others who have heavy workloads," and "I assist supervisor with his/her work (when not asked)." On the other hand, OCB-O consists of behaviors that benefit the organization in general (Williams & Anderson, 1991). OCB-O refers to behaviors that are concerned with benefiting the organization as a whole, such as conscientiousness, sportsmanship and civic virtue. Example of items concerning this dimension includes "My attendance at work is above the norm," and "I give advance notice when unable to come to work."

To measure OCB, 14 items were adapted from Williams and Anderson (1991). It was reported that the scale has reliability (i.e. Cronbach's alpha) of .96 for OCB-I and .74 for OCB-O (Kim, O'Neill, & Cho, 2010).

The Williams and Anderson (1991) measurement scale was demonstrated to enjoy a wide scale use by different scholars (e.g., Dimitriades, 2007; Sesen, Cetin, & Basim, 2011; Vigoada-Gadot, 2007) and, thus, demonstrated the validity of the instrument. A seven-point Likert scale ranging from '1' "strongly disagree" to '7' "strongly agree" was employed to measure all items.

### 3.5.4   Demographic Data

Five demographic variables including gender, age, tenure, highest educational qualification and position of responsibility of the respondents of this study were considered. Categorical scale was used to measure the demographic variables. Gender was asked on a dichotomous scale of male and female. Three categories of age were developed to ask the respondents their age. A dichotomous scale was used to measure job responsibility: (a) supervisory; and (b) non-supervisory positions. Four tenure categories were used to measure work experience of the respondents. Finally, five categories of educational qualifications were developed to measure highest level of education for the respondents.

### 3.6     Research Design

Research design has been defined as a master plan specifying the methods and procedures for collecting and analysing the needed information (Zikmund, 2000). There are three types of business research including exploratory, descriptive and explanatory (Zikmund, 2000; Sekaran, 2003). The decision about the type to be used depends on an individual's understanding and clarity of the research problem. Exploratory design is conducted to gather information on a particular problem at hand, and thus does not provide conclusive results. Exploratory research is, therefore, to enable understanding of a new phenomenon, which further studies will be conducted to gain verifiable and conclusive evidence (Zikmund, Babin, Carr, & Griffin, 2010). Descriptive design is conducted in particular situations where there is just a little knowledge of the nature of a problem. It is conducted, therefore, to provide a more specific description of a problem (Zikmund, 2000; Sekaran, 2003). Causal/hypothesis testing/explanatory design is conducted to further provide

specific knowledge and description of the nature of relationships among the variables being investigated (Zikmund, 2000; Sekaran, 2003).

This study is considered explanatory because it sought to explain the relationships between servant leader behaviours, psychological ownership and organizational citizenship behaviors (OCBs). Thus, hypotheses were formulated to provide explanation of their relationships by demonstrating the relationships as statistically significant or not.

Other aspects of research design to highlight for this study include population and sample of the study, sampling and sampling technique, method of data collection and data analysis. These are discussed in the following sections.

### 3.6.1 Population of the Study

Population of the study refers to the entire group of people, events or things of interest that the researcher wishes to investigate (Sekaran & Bougie, 2010). The authors further stated that population of the study is the group of people, events or things of interest for which a researcher wants to make inferences based on a derived sample.

This study focused on three important utility sector organizations. They are Power Holding Company of Nigeria (PHCN), Nigeria Telecommunications Limited (NITEL), and Kano State Water Board (KSWB) in Kano State north-western part of Nigeria. The Kano State of the North-west part of Nigeria was selected for this study because it is the most populated geo-political zone with estimated population of 10 million out of the total estimated Nigerian population of 140 million (NPC, 2006). Hence, Kano State represents an important Nigeria's zone for efficient

operation and sustainability of the three utility organizations under study. The State depends largely on the efficient functioning of the three utility organizations. Additionally, the State is very important for the three utility organizations in terms of their revenue generation and strategic planning. The three utility organizations have a total population of 1,169 employees dispersed in different stations and units across the 5 major local government areas of Kano. The population consists of all the employees of the three utility organizations under study. Specifically, the population comprises of 529 employees from PHCN PLC, 140 from NITEL PLC and 500 from Kano State Water Board.

Because this study assessed the influence of supervisors/managers' servant leadership behaviors on their subordinates' OCB through psychological ownership for the organisation, the unit of analysis for this study was naturally individual employee. Therefore, middle and lower level employees were considered appropriate as the unit of analysis.

### 3.6.2   Sampling Design: Sample Size and Power Analysis

A sample is a set of individuals or participants selected from a larger population for the purpose of a survey (Salant & Dillman, 1994). An optimal sample is important for minimizing the cost of sampling error, thus indicating the need for selecting an appropriate sample size. Specifically, Salkind (2003) emphasized that an appropriate sample size is necessary for any research because too small sample size is not a good representative of the population. Too small sample size may lead to committing Type I error, which is the probability of wrongly rejecting a particular finding when it in fact to be accepted (Sekaran, 2003). Furthermore, Sekaran (2003)

argued that too large sample size is not appropriate because of possible problem of type II error, which is accepting a particular finding when it is supposed to be rejected.

Ticehurst and Veal (1999) have pointed the importance of determining an absolute sample size that is independent of the study population, thus indicating the need for method of determining a sample size such as statistical power test. Specifically, Cohen (1997) stressed that sample size should be determined using a suitable power of statistical test. Therefore, in deciding about sample size for this study, power of a test becomes a viable option. The power of a statistical test is defined as the probability of rejecting a null hypothesis or rejecting a specific effect size of a particular sample size at a particular alpha level (Cohen, 1988). The test has the capacity to detect a difference if it truly exists in the wider population. In addition, even if sample size to be used in a particular study has been determined through other methods, it is still appropriate and worthy to use power analysis so that the probability of detecting the effects of different sample sizes is explicitly known (Ramalu, 2010).

Using the G*Power 3.1 software, sample size is computed as a function of user-specified values for the to-be detected population effect size ($f^2$), required significance level ($\alpha$), the desired statistical power ($1-\beta$), and total number of predictors in the research model (Faul, Erdfelder, Lang, & Buchner, 2007). Hence, to determine the sample size for this study, an a priori power analysis was conducted using the software package G*Power 3.1 (Faul *et al.*, 2007). Six predictor variable equations were used for determining the sample size for this study. Moreover, consistent with Cohen's (1977) recommendations, the following

standards were used in calculating the sample size used for this study: effect size ($f^2$= 0.15); significance alpha level ($\alpha$= 0.05); desired statistical power (1-$\beta$ = 0.95); and total number of 6 predictors (EH, CVC, CS, HSGS, PSF and PO).

As seen in Figures 3.2 and 3.3, results of the statistical test revealed that for a multiple regression based statistical analysis, a sample size of 146 is appropriate for this study. The results also revealed the statistical power for detecting effect sizes for this study was determined at a recommended value of 0 .95 (Cohen (1977).

The determined sample size of 146 for a wider population of 1,169 is seems to be inadequate. Hence, the need to explore a different technique for sample size determination becomes important. Consequently, Krejcie and Morgan's (1970) generalized scientific guideline was used for determining the sample size for this study. As a result a total of 291 employees were indicated to be adequate for the population of 1,169 subjects.
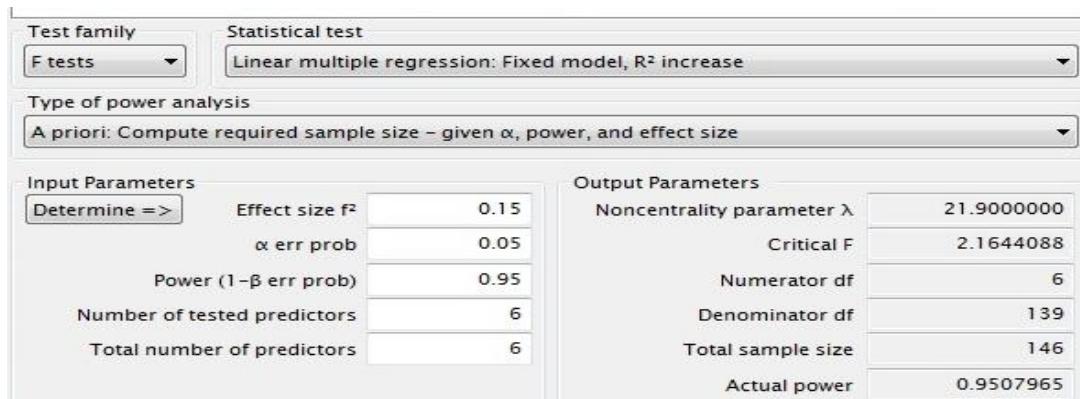


Figure 3.2

*Power Analysis for Medium Effect*
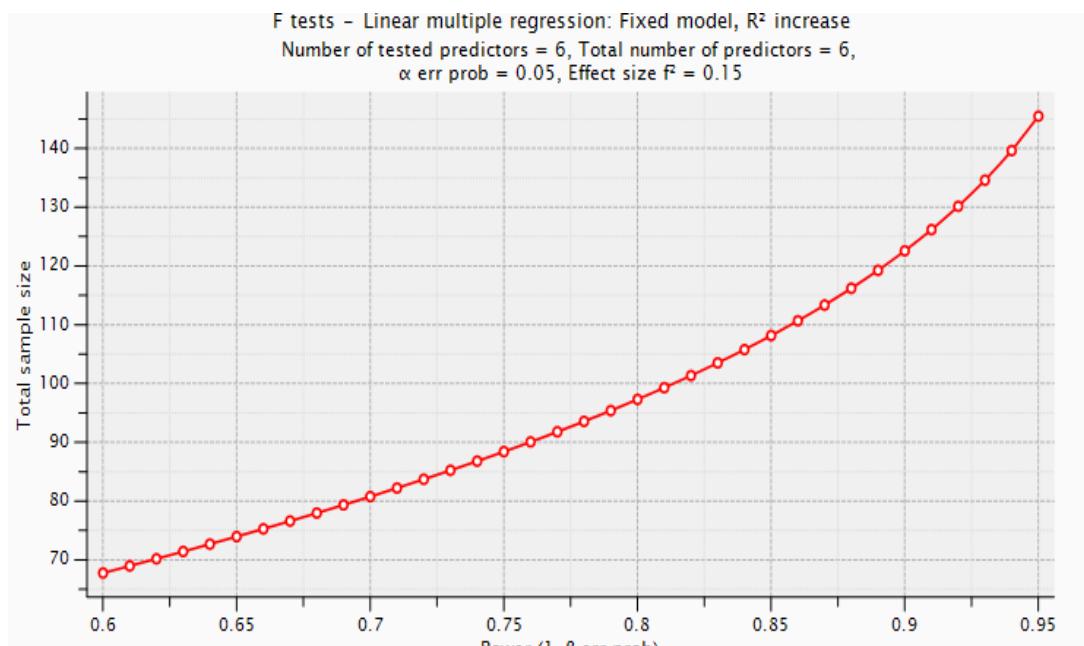
Figure 3.3

*X-Y Plot for Medium Effect Power Analysis*

The determined sample of this study was also appropriate going by the Roscoe's (1975) rule of thumb. Roscoe states that for most research, a sample bigger than 30 and less than 500 is appropriate. In addition, Hair *et al*. (2010) state that for a multivariate research, the sample size should be several times (preferably 10 or more times) larger than the number of the research variables. In the present study, there are eight variables and the required sample should, therefore, be 80 or more.

In order to avoid incorrect sample size and ensure accuracy in the process of determining a representative sample size for this study, a more rigorous method, which was suggested by Dillman (2000) was used. Thus, given the population size of 1,169, the sample size was computed using the below formula:

$$n = \frac{(N)(p)(1-p)}{(N-1)(\frac{B}{C})^2 + (p)(1-p)}$$

Where n is the computed sample size needed for the desired level of precision; N is the population size; p is the proportion of population expected to choose; B is acceptable amount of sampling error, or precision; and finally C is Z statistic associated with the confidence level which is 1.96 that corresponds to the 95% level. B can be set at .1, .05, or .03, which are $\pm$ 10, 5, or 3% of the true population value, respectively. In this study, the acceptable amount of sampling error or precision is set at .05 or 5%. Confidence level of 1.96 corresponds to the 95% level.

Before collecting the data for this study, the proportion of participants who would respond "favourably" or unfavourably was not known, therefore, consistent with Dillman (2000), the proportion of .05 was used instead of .03 for a more homogenous sample. Using .05 will lead to a greater sample size than using .03; however, it always provides an adequate sample size for a smaller or greater population (Biemer & Lyberg, 2003).

Where N = 1,169, p = 0.5, B = 0.05, C = 1.96

$$n = \frac{(1,169)(0.5)(1-0.5)}{(1,169-1)\left(\frac{0.05}{1.96}\right)^2 + (0.5)(1-0.5)}$$

$$n = \frac{(1,169)(0.5)(0.5)}{1,168 * 0.000651 + (0.5)(0.5)}$$

$$n = \frac{292.25}{0.760 + 0.25}$$

$$n = \frac{292.25}{1.01}$$

$$n = 289.36 \simeq 290$$

Based on the results of sample size computation, this study needed 290 participants to complete the survey. As expressed in the formula, the sample was within the sample frame of $\pm$5% margin errors. As can be observed there is no significant difference between the determined sample size of 291 using the Krejcie and Morgan's scientific guideline and 290 determined using the method suggested by Dillman (2000). Because the aim is to have a larger sample size that would be more representative of the study population, the determined sample size of 291 obtained using the Krejcie and Morgan's scientific guideline has been adopted.

### 3.6.3 Estimating Expected Response Rate

For this study, 570 questionnaires instead of 291 were distributed among lower and middle level employees of the participated organizations as stated in Table 3.1. The oversampling is to help in making up the possible loss as a result of non-cooperative subjects and damages (Salkind, 1997). Additionally, the oversampling was meant to ensure that the non-response bias and non-response rate will not affect the results (e.g., Phokhwang, 2008; Sindhu & Pookboonmee, 2001; Ringim, Razalli, & Hasnan, 2012). Consistent with Babbie's (1973) argument that 50%

response rate is regarded as an acceptable rate in social research surveys; this research is set out to achieve just that.

### 3.6.4   Sampling Techniques

Probability sampling technique was used in this research. The technique provides every individual an equal opportunity/chance of being selected as the sample object (Sekaran, 2003). One of the major benefits of this sampling technique is that there is no bias of the researcher against the choice of sample objects (Salkind, 2003). The technique is also regarded for high generalizability (Cavana, Dalahaye, & Sekaran, 2001).

This study was aimed at drawing samples from three various utility organizations, hence, the need for stratified random sampling. Stratified random sampling as the name implies, involves classifying sample elements into strata followed by selecting the elements from each stratum using simple random sampling procedure (Sekaran, 2003). Stratified random sampling involves categorizing research subjects into strata and selecting from each stratum using a simple random sampling procedure (Sekaran, 2003). Simple random sampling entails selecting a sample at random by the researcher from the sampling frame (Saunders *et al.,* 2009). The random selection is achieved manually using random number table, or by computer, or through online number generator.

Stratified random sampling can either be proportionate or disproportionate. It is proportionate when the subjects are drawn from each stratum according to a specific percentage. It is disproportionate when the subjects are drawn from each stratum without regard to any specific percentage, but number of the elements

contained in each stratum. This study adopted the disproportionate sampling procedure.

The utility organizations were categorized into three strata: (1) electricity represented by PHCN PLC with a sample of 460 subjects; (2) telecommunication represented by NITEL PLC with a sample of 122 subjects; and (3) water represented by KSWB with a sample of 435 subjects. Information about the population elements, sampling frame and the actual sample (subjects) used in this study were provided in Table 3.1.

The lists of the population elements for the three utility organizations were obtained from the payroll offices of the respective organizations after approval was given from some top management officials. The population elements for PHCN, NITEL and KSWB were 529, 140 and 500 respectively totalling 1,169 employees. After collecting the list of the population elements, the prospective respondents (i.e., sampling frames), based on their levels or designations, were fished out and listed down in separate places. The selection of the prospective respondents from the population frame was carefully done to ensure that only the targeted individuals were selected. To confirm correctness of the selection, lists of the sampling frame were verified by some officials from the personnel and payroll units of the participated organizations. After the lists were verified, simple random sampling was used for distribution of questionnaires to the actual subjects (sample). Random numbers were generated using the computer system. Specifically, Microsoft Excel software applying a mathematical formula {= rand ( )} was used to enable selection of the sample.

**Table 3.1**
*Disproportionate Stratified Random Sampling*

| Name of organizations | Population | Sample Frame | Sample size |
|---|---|---|---|
| PHCN PLC | 529 | 460 | 251 |
| NITEL PLC | 140 | 122 | 72 |
| Kano State Water Board | 500 | 435 | 247 |
| Total | 1169 | 1017 | 570 |

**Source: Researcher**

The adopted sampling technique (i.e. stratified random sampling) is the best technique for the present study because the aim of this study is to have samples drawn from the three public utility organizations, namely, PHCN, NITEL and KSWB. Stratified random sampling is appropriate for a study when a researcher is having a subdivided population that demands treating each subdivision as a stratum in order to obtain estimates of known precision (Biemer & Lyberg, 2003; Sekaran, 2003). Furthermore, disproportionate stratified random sampling was used in this study because the technique is more suitable for situations where unequal variability is expected from some strata; where a stratum or some strata appear to be too small or too large (Cavana *et al*., 2001). It is observable from Table 3.1 that unequal variability is expected from PHCN, NITEL and KSWB looking at their respective sample size of 251, 72 and 247.

### 3.6.5   Questionnaire Design

A structured self-administered questionnaire consisting of 54 closed ended multiple choice-questions was employed for the survey. The instrument comprises 49 questions related to the three constructs of this study and five questions related to

demographical variables. All the questions were prepared in the English language. English language was a medium of communication in the instrument because it is an official language in Nigeria.

The construct for this study include servant leadership, psychological ownership and organizational citizenship. Two constructs (servant leadership & OCB) are multi-dimensional while psychological ownership is uni-dimensional. Accordingly, the questionnaire instrument was made up of four sections. Section 1 consisted of 5 demographic questions designed to obtain information regarding the participants' age, gender, highest level of education, years of experience and employee status. Section 2 consisted of 26 questions to measure supervisors' servant leadership qualities. Section 3 consisted of 7 questions to measure employees' psychological ownership. Finally, section 4 consisted of 14 questions to measure the employees' OCB.

The questionnaire was designed in a booklet format with graphic designed front cover page. It is argued that questionnaire format, physical arrangement of items on the pages and general appearance are important in attracting respondents and success of the study (Creswell, 2003). Moreover, a well designed and carefully constructed questionnaire facilitates the collation and analysis of the data collected as well as increasing the response rate (Cone, 2001; Trochim, 1999). Additionally, in order to increase the response rate, clear and brief instructional information, coherent arrangement of questionnaire items, transitional phrases and an aesthetic arrangement of questions appear to be rewarding (Kumar, 1999).

### 3.6.6 Methods of Data Collection

Using a cross-sectional study design, this study employed a field study design. Cross-sectional study involves gathering the data for a particular study only once or at one point in time to meet the research objectives (Cavana *et al*., 2001). Cross-sectional survey method was chosen for this study to avoid the long-time consumption that characterizes longitudinal research (Sekaran & Bougie, 2010). Importantly, there was no attempt to manipulate any of the research constructs. With the help of employed research assistants, questionnaires were distributed to the selected sample. Follow-ups using physical contact/visit and telephone calls were employed to ensure timely completion and collection of distributed questionnaires. As an inducement for quick response each respondent was given a simple ordinary pen.

Some theories indicate that giving an incentive to prospective respondents up front can be effective. Specifically, the norm of reciprocity states that individuals should respond positively to individuals who have helped them (Goulder, 1960). Similarly, cognitive dissonance theory states that an individual who receives a gift may experience dissonance if at the end could not return the favor (Hackler & Bourgette, 1973). Importantly, it has been argued that it is not worrisome for researchers to induce reciprocity by providing an incentive (i.e. gift card, pen etc.) to every potential participant regardless of actual participation (Smith *et al*., 2013). Thus, suggesting that it may be unethical if the researcher distribute gifts to only those who have guaranteed response. In the case of this study, it could be said that the gift (i.e. pen) has worked well looking at the interest and appreciation shown by the prospective respondents during the questionnaire distribution.

### 3.6.7 Design of Data Collection Technique

Questionnaire was used as the main data collection technique for this study. Questionnaire technique, which involves asking individuals specific behaviors, is commonly used in social science research (Sekaran & Bougie, 2010).

Before setting out for data collection a letter of introduction was collected from the Othman Yeop Abdullah Graduate School of Business, Universiti Utara Malaysia. The letter requested for assistance from the participating organizations (PHCN, NITEL and KWB) regarding the conduct of this study. The letter helped greatly in facilitating the conduct of this study by building confidence and trust in the minds of human resource managers that gave permission for distribution of the questionnaires. The General Managers of the participated organizations directed some personnel managers to assist along with the researcher and two research assistants in distribution to and collection of the questionnaires from the employees.

The major problem encountered during the course of data collection was the slowness experienced in collecting back the completed questionnaires. At the beginning the perception of the researcher was that in one month the collections would come to an end because the respondents promised to return completed questionnaire within a maximum of one week. Therefore, phone calls and frequent visits to the participated organizations at least twice in a week were made up to the end of the data collection. Eventually, the distributions and collections lasted for 14 weeks.

### 3.6.8    Pilot Study

A pilot study is a small scale preliminary investigation conducted in order to evaluate feasibility, time and cost in order to predict an appropriate sample size and improve upon the study design prior to actual conduct of a full-scale study (Hulley, 2007). A pilot study is important because it can unveil shortcomings in the design of a proposed survey or procedure that can be addressed before time and resources are committed on large scale study (Doug *et al*., 2006).

Specifically, the reasons for this pilot study include: (1) to determine validity and reliability of items in the questionnaire; (2) to assess the adequacy of item-wording, phrasing and questions' construction for accurate results; (3) to evaluate whether questions are framed in a way that would yield better response; and (4) to find if respondents could supply the needed data. The validity of questionnaire is the extent to which it measures what actually it is supposed to measure not something else, whereas reliability of questionnaire is the extent to which the questionnaire is free from errors and results there from are consistent and stable across time and contexts (Sekaran & Bougie, 2010).

The content or face validity of the instrument was tested before the pilot study. Content validity is defined as the extent to which an instrument covers the meaning imbedded in particular concepts (Babbie, 2004). In addition, content validly involves consulting with a small number of potential respondents or panel of experts for their opinion over the items, wordings and phrases contained in the instruments (Hair *et al*. 2007; Sekaran & Bougie, 2010). Consistent with this, the original draft of the instrument for this study was distributed to five experts at Universiti Utara Malaysia, College of Business, who are familiar with the

constructs. The experts were one professor, two associate professors and two senior lecturers. Consequently, because the instruments for the three main constructs of this study were adopted from previous studies conducted in western countries, some of the items were reworded to make them clearer. In addition, two items of servant leadership instruments were dropped following the advice received from one of the experts that examined the questionnaire before the actual survey. These items were item 13, which states that "My manager gives me the responsibility to make important decisions about my job" and item 14, which states that "My manager encourages me to handle important work decisions on my own". Thus, the total servant leadership items reduced from 28 to 26 items.

Following the scrutiny of the instruments by a group of experts and the fact that previous studies have tested the instruments at different times and contexts the instruments are considered to be robust and appropriate for this study. Specifically, servant leadership instrument has demonstrated signs of robustness and validity after using it severally in diverse cultures at different times (Hu & Liden, 2011; Liden *et al*., 2008; Vondey, 2010). Similarly, psychological ownership instrument has been proved to be valid in different number of studies conducted within the western contexts (Mayhew *et al*., 2007; Van Dyne, & Pierce, 2004) and more especially OCB instrument was used and proved to be valid in different situations and contexts (Dimitriades, 2007; Sesen, Cetin, & Basim, 2011; Vigoada-Gadot, 2007; Williams & Anderson, 1991).

A sample size for a pilot study is traditionally smaller consisting of 15 to 30 elements, though can increase substantially depending of peculiarities (Malhotra, 1999). Eighty questionnaires were distributed among middle and lower level

employees of the PHCN, NITEL and KSWB. The number of the questionnaires was increased to 80 beyond the Malhotra's (1999) suggestion in order to avoid low response rate. However, 69 questionnaires were completed and returned, but only 65 were retained as usable after four of them were removed as a result of various errors, indicating a response rate of 81 percent.

The pilot study was conducted in month of November, 2011 and the process lasted for two weeks. Different tests of reliability were conducted; however, the common method used by researchers is "the internal consistency reliability test" (Litwin, 1995). It is the extent to which items of a particular construct converge together and are independently capable of measuring the same construct; and at the same time the items are correlated with each other. Test of internal consistency reliability of Cronbach's alpha coefficient (Sekaran & Bougie, 2010) was employed. As exhibited in Table 3.2, the results demonstrated that all measures attained high reliability coefficient, ranging from .711 to .838. Research gurus consider a reliability coefficient of .60 as average reliability, and a coefficient of .70 and above as high reliability (Hair *et al*., 2006; Nunnally, 1967; Sekaran & Bougie, 2010).

**Table 3.2**
*Summary of Pilot Test Reliability Results*

| Construct | Dimension | No of items | Cronbach'salpha |
|---|---|---|---|
| Servant leadership | Seven (7) | 26 | 0.755 |
| | Emotional healing | 4 | 0.738 |
| | Creating value for the community | 4 | 0.838 |
| | Conceptual skills | 4 | 0.712 |
| | Empowering | 4 | 0.728 |
| | Putting subordinates first | 3 | 0.826 |
| | Behaving ethically | 4 | 0.726 |
| | Helping subordinates grow and succeed | 3 | 0.717 |
| Psychological ownership | | 7 | 0.776 |
| | | | 0.727 |
| OCB | Two (2) | | |
| | OCB-I | 7 | 0.742 |
| | OCB-O | 7 | 0.711 |

**Source: Researcher**

## 3.7    Data Analysis

Upon completion of data collection, combinations of both descriptive and inferential statistics were employed as methods of data analysis. The PLS SEM approach was used in the analysis of the data colleceted for this study. Specifically, two major PLS SEM software applications including SmartPLS (Ringle et al., 2005) and PLS-Graph (Chin, 2003) were used in the analysis and presentation of results.

## 3.7.1   Descriptive Analysis

Descriptive analysis is often used to describe phenomena of interest (Sekaran & Bougie, 2010). In those analyses, descriptive information is analysed statistically in terms of how frequent certain phenomenon of interest occurs (i.e., frequency), the average score or central tendency (i.e., mean) and the extent of variability (i.e.,

standard deviation). In this study, descriptive analysis was applied mainly to characteristics of the sample and all the constructs used in this study.

### 3.7.2   Partial Least Squares (PLS) Technique

PLS SEM technique is called a second generation structural equation modelling (Wold, 1982). The relatively new technique works well with structural equation models that contain latent variables and a series of cause-and-effect relationships (Gustafsson & Johnson, 2004). The PLS SEM approach is a good and flexible tool for statistical model building as well as prediction (Ringle, Wende, & Will, 2012).

Specifically, the PLS technique was used for this study because of the following reasons. Firstly, structural equations models have been demonstrated to be superior models that perform estimations better than regressions for assessing mediation (Brown, 1997; Iacobucci, Saldanha, & Deng, 2007; Mattanah, Hancock, & Brand 2004; Preacher & Hayes, 2004). It has been reported that PLS SEM accounts for measurement error and can provide more accurate estimates of mediating effects (Chin, 1998a).

Secondly, PLS path modeling becomes more appropriate for real world applications and more advantageous to use when models are complex (Fornell & Bookstein, 1982; Hulland, 1999). The soft modeling assumptions of PLS technique (i.e., ability to flexibly develop and validate complex models) gives it the advantage of estimating large complex models (Akter *et al*., 2011). The current study examined relationships among eight models (i.e. EH, CVC, CS, HSGS, PSF, PO, OCB-I and OCB-O) within the structural model and hence employing the use of PLS SEM techniques was appropriate for better prediction.

Thirdly, in most social science studies, data tend to have normality problem (Osborne, 2010) and PLS path modelling does not necessarily require data to be normal (Chin, 1998a). In other words, PLS treats non-normal data relatively well. By and large, PLS path modelling was selected for this study to help avoid any normality problem that might arise in the course of data analysis for the current study. Fourthly, PLS SEM offers more meaningful and valid results, while other methods of analysis such as software package used for statistical analysis (SPSS) often result in less clear conclusions and would require several separate analyses (Bollen, 1989). Additionally, Tabachnick and Fidel (2007) state that SEM is one of the most powerful statistical tools in social and behavioural sciences that have the ability of testing several relationships simultaneously.

Regarding this study, SmartPLS path modelling was used to establish measurement and structural models. Measurement model was used to explain or assess constructs' reliability and validity of the current study. Secondly, structural model was used to conduct bivariate correlation analysis and simultaneous regressions analyses to establish correlations, and relationship effects among constructs under investigation. Additionally, using the PLS mechanisms of algorism and bootstrapping, the mediating effects of psychological ownership (mediator) on the relationship between servant leadership, organizational citizenship behaviors (OCBs) were analysed.

## 3.8    Summary

This chapter has discussed the research methodology for this study. It has outlined the sampling design, which is concerned with methods and strategy of data

collection and the rationale for the research design. Specifically, this chapter has described theoretical framework, conceptual definitions, hypotheses development, underpinning theories, population of the study, sample size and sampling technique, data collection and data analysis techniques.

The chapter has also discussed the instrument used for this study and validity and reliability of the instrument. Moreover, this chapter has described the method of data analysis used for this study and the rationale adopting such method. Finally, this chapter has explained the pilot study conducted and its result.

# CHAPTER FOUR

## RESULTS

### 4.1   Introduction

This chapter first discusses response rate from the field. Secondly, this chapter analyzes results of factor analysis of the major constructs of the study including servant leadership, psychological ownership and OCB. Using the PLS approach, the chapter analyzes the measurement model or goodness of measures through construct validity and reliability analysis of measures used. Additionally, based on the data gathered from the questionnaire survey, this chapter analyzes the structural model – relationships between five exogenous constructs of servant leadership and three endogenous constructs of psychological ownership, OCB-I and OCB-O.

### 4.2   Response rate

A total of 386 respondents sourced from three utility organizations in Kano State, Nigeria have filled and returned the distributed questionnaires. These utility organizations include Power Holding Company of Nigeria (PHCN) Plc, Nigeria Telecommunication Limited (NITEL), and Kano State Water Board (KSWB). However, as depicted in Table 4.1, a total of 325 questionnaires were finally retained for analysis from a total 386 that were collected back from the respondents. Specifically, after the data collection, a total of 61 responses were excluded from the analysis for two major reasons. First, because some questionnaires were incomplete, several missing data per case has been experienced. Specifically, a total of thirty two (32) questionnaires were excluded from analysis for the incompleteness. Secondly, univariate and multivariate outliers have also caused

some questionnaires to be excluded. Regarding outlier problem, twenty nine (29) questionnaires were excluded from the analysis. Excluding such number of questionnaires or data is important because they do not represent the sample (Hair *et al*., 1998; Meyers *et al*., 2006).

**Table 4.1**
*Questionnaire Distribution and Decisions*

| Item | Frequency | Percentage % |
| --- | --- | --- |
| Distributed questionnaires | 570 | 100 |
| Returned questionnaires | 386 | 68 |
| Rejected questionnaires | 61 | 11 |
| Retained questionnaires | 325 | 57 |

**Source: Researcher**

A total of 325 respondents constitute the sample for this study which gave an effective response rate of 57% that covers a broad range of lower and middle level employees of Power Holding Company of Nigeria (PHCN) Plc, Nigeria Telecommunication Limited (NITEL) and Kano State Water Board in Kano State, Nigeria. This rate is considered sufficient considering the Sekaran's (2003) argument that response rate of 30% is acceptable for surveys. Similarly, the current response rate is considered adequate going by the suggestion that a sample size should between 5 and 10 times the number of study variables (Bartlett, Kotrlik, & Higgins, 2001; Hair *et al*., 2010). Given the number of variables in this study is 8; a sample of 80 is adequate for analysis. More importantly, the tool of analysis for the current study, which is PLS, requires a minimum of only 30 responses (Chin, 1998b), thus a total of 325 response rate for this study is greatly adequate for analysis. More importantly, 57% response rate falls within the range of common response rate of 40-50% in social science study in Nigeria (Linus, 2001).

158

## 4.3    Test for Non-response Bias

Non-response bias has been defined as the mistake a researcher expects to make while estimating a sample characteristic because some types of survey respondents are under-represented due to non-response (Berg, 2002). It is well explained in the literature that "there is no minimum response rate below which a survey estimate is necessarily biased and, conversely, no response rate above which it is never biased" (Singer, 2006, p. 641). However, no matter small the non-response, there is a possible bias which must be investigated (Pearl & Fairley, 1985; Sheikh, 1981), thus the need for conducting the non-response bias analysis for this study. As indicated in Table 4.2, respondents were divided in to two independent samples based on their response to survey questionnaires regarding three main survey variables (servant leadership, psychological ownership and OCB). One of the standard ways to test for non-response bias for this study is to compare the responses of those who responded to the questionnaires distributed early before December, 2011 (i.e. before Christmas break) and those who responded to the questionnaires distributed after December, 2011 (i.e. after Christmas break). Therefore, those who responded to questionnaires distributed late after December, 2011 are, in effect, a sample of non-respondents to the first distributed questionnaires and is assumed that they are representative of the non-respondents group. Research has demonstrated that late responders are often similar to non-respondents (Miller & Smith, 1983; Oppenheim, 1966).

**Table 4.2**
*Descriptive Statistics for Early and Late Respondents*

|  | Collection Period | N | Mean | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|---|
| SL_mean | Early before December, 2011 | 136 | 4.964 | 0.942 | 0.081 |
|  | Late after December, 2011 | 189 | 4.773 | 0.874 | 0.064 |
| PO_mean | Early before December, 2011 | 136 | 5.076 | 1.009 | 0.086 |
|  | Late after December, 2011 | 189 | 4.952 | 0.957 | 0.070 |
| OCB_mean | Early before December | 136 | 4.905 | 0.756 | 0.065 |
|  | Late after December, 2011 | 189 | 4.855 | 0.641 | 0.047 |

**Source: The Researcher**

Using the independent samples t-test for equality of means, results indicate that the group mean and standard deviation for early responses and late responses are apparently not different. As shown in Table 4.3, the t-test results demonstrate that there is no significant difference between early responses and late responses based on the items in servant leadership (t= 1.889, p< 0.060); psychological ownership; (t= 1.120, p< 0.063); and OCB (t= 0.648, p< 0.517) variables respectively. Thus, results indicate that while these items are statistically different, the differences are quite small and not significant to affect the overall results.

**Table 4.3**
*Independent Samples T-test for Equality of Means*

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | Sig. (2-tailed) | Mean Diff. | Std. Error Diff. | 95% Confidence Interval of the Difference | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | F | Sig. | t | df | | | | Lower | Upper |
| SL mean | Equal variances assumed | 1.02 | 0.313 | 1.889 | 0.063 | 0.060 | 0.192 | 0.102 | -0.011 | 0.394 |
| | Equal variances not assumed | | | 1.866 | 0.264 | 0.063 | 0.192 | 0.103 | -0.093 | 0.340 |
| PO mean | Equal variances assumed | 0.646 | 0.422 | 1.120 | 0.268 | 0.264 | 0.123 | 0.110 | -0.095 | 0.342 |
| | Equal variances not assumed | | | 1.110 | 0.517 | 0.268 | 0.123 | 0.111 | -0.103 | 0.203 |
| OCB mean | Equal variances assumed | 1.959 | 0.163 | 0.648 | 0.529 | 0.517 | 0.050 | 0.078 | -0.107 | 0.208 |
| | Equal variances not assumed | | | 0.631 | 0.060 | 0.529 | 0.050 | 0.080 | -0.011 | 0.394 |

**Source: The Researcher**

## 4.4 Common Method Bias

Viewed as potential problem in behavioral studies, common method variance is defined as the variance that is invariably attributable to the measurement procedure rather than to the actual constructs the measures represent (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). There has been increasing concern about how to reduce, or eliminate method biases because they are one of the main sources of measurement error found in behavioral studies.

This study has used self-reported data from lower and middle-level employees of utility organizations in Nigeria, which creates potential for common

method variance (CMV). Indicating that the predictors (i.e., servant leader behaviors and psychological ownership), and criterion variables (i.e., OCB-I and OCB-O) are obtained from the same single source or rater (employee). To address the issue of CMV, some procedural and statistical measures were taken in the research process (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Some of these procedural and statistical controls include reverse worded questions, elimination of item ambiguity, allowing the respondents' anonymity and Harman's single-factor test as recommended by Podsakoff *et al*. (2003).

Harman's single-factor test has been one of the most widely used techniques by researchers to address the problem of common method variance. The procedure provides loading simultaneously of all study variables into an exploratory factor analysis and examining the un-rotated factor solution to establish the number of factors that are necessary to account for the variance in the variables. The rule states that if a substantial amount of common method variance exists, the results of the factor analysis will either be a single factor, or that a single factor will cause for the majority of the covariance among the measures (Podsakoff *et al*., 2003). The results of the un-rotated exploratory factor analysis indicate 11 factor variables, indicating absence of a general factor in the un-rotated factor structure. It thus shows that common method bias may not be a serious problem in the present study data.

### 4.5 Description of the Sample of Study

This section is concerned with description of the sample of the present study. It involves the description of the sample at individual level. Table 4.4 presents background information of the respondents who have participated in the current

survey. The respondents consist of lower and middle level employees of Power Holding Company of Nigeria (PHCN) Plc, Nigeria Telecommunication Limited (NITEL), and Kano State Water Board in Kano State, Nigeria. The characteristics examined included gender, age, position, tenure/experience and level of education. The individual characteristics have been measured on nominal and ordinal scales.

**Table 4.4**
*Description of Sample Characteristics*

|   | Item | N | Percentage (%) |
|---|---|---|---|
| 1 | **Gender** | | |
|   | Male | 247 | 76.0 |
|   | Female | 78 | 24.0 |
| 2 | **Age** | | |
|   | 21-30 | 89 | 27.4 |
|   | 31-40 | 122 | 37.5 |
|   | 41-50 | 82 | 25.2 |
|   | 51 and above | 29 | 8.9 |
| 3 | **Position of Responsibility** | | |
|   | Non-supervisory | 182 | 56.0 |
|   | Supervisory | 143 | 44.0 |
| 4 | **Experience** | | |
|   | Less than 1 year | 25 | 7.7 |
|   | 1-5 years | 72 | 22.2 |
|   | 5-10 years | 80 | 24.6 |
|   | 10 years & above | 148 | 45.5 |
| 5 | **Educational Qualification** | | |
|   | Doctorate Degree | 5 | 1.5 |
|   | Master Degree | 60 | 18.5 |
|   | First Degree | 128 | 39.4 |
|   | Diploma/NCE/ etc | 91 | 28.0 |
|   | Secondary Certificate | 37 | 11.4 |
|   | Others | 4 | 1.2 |

**Source: The Researcher**

Table 4.4 has shown that majority of the respondents were males. This may be as the result of population structure of Nigeria where males constitute 60 percent and females 40 percent. Another reason for dominance of male respondents over females may be related to Northern Nigeria's culture, in which Kano State falls, where larger percentage of females do not belong to the working class. Literature

163

reported that less than 20 per cent of women in the North-West of Nigeria are literate and have attended school (UNICEF, 2007).

Regarding age of the respondents, Table 4.4 indicated that most of the respondents have fallen within 31-40 age brackets, while respondents within the age bracket of 51 and above constitute the minority. This shows that the sample of this study largely comprised of young men and women of the total workforce considered in this study. Additionally, the descriptive statistics reveals that majority of the respondents were non-supervisory. The responsibility structure of the respondents is important to the current study because the study is concerned with assessing the impact of leadership behaviors on the subordinates desire to elicit OCB through their sense of psychological ownership for their organization. Similarly, Table 4.4 reveals that majority of the sample population have had quite long working experience. Finally, the descriptive statistics shows that majority of the respondents have had their first degree, or equivalent. Hence, the data used in this study were provided by respondents from diverse educational backgrounds.

## 4.6    The Measurement Model

This study used PLS structural equation modelling (SEM) to estimate its theoretical model using the software application SmartPLS (Ringle, Wende, & Will, 2012). PLS SEM lies on two important multivariate techniques including factor analysis, and multiple regressions (Hair *et al*. 2010). PLS tool is used throughout analysis of the main and mediating results for this study.

In PLS analysis, the first step is to assess the measurement model, or the outer model. Measurement model is concerned with determining the goodness of

measures. The two main criteria used in PLS analysis to assess the measurement model or what is alternatively called the outer model include validity and reliability (Ramayah, Lee, & In, 2011). Reliability test tries to find how consistently a measuring instrument measures the concept it is supposed to measure, whereas validity tests try to find out how well an instrument measures a particular concept it is designed to measure (Sekaran & Bougie, 2010). More elaborately, the outer model is assessed by the individual item reliability, construct internal consistency and construct validity. The reliability, convergent and discriminant validity of the instruments used in this study are evaluated using the approaches developed for a PLS context by Fornell and Larcker (1981). In PLS analysis, the predictive power of a particular model is assessed by the R squared ($R^2$) values of the endogenous constructs or latent variables, as well as ascertaining the standard path coefficient for each relationship from exogenous variables to endogenous variables. The $R^2$ values are interpreted in the same way as those obtained from multiple regression analysis. The $R^2$ values indicate the amount of variance in the construct that is explained by the model (Barclay *et al.* 1995; Chin, 1998b).

Because PLS model does not follow distributional normality assumption of the observations in its procedure for estimating parameters, the traditional parametric-based techniques for significance testing are not appropriate in PLS (Chin, 2010). Instead, two techniques are used in PLS analysis for assessing statistical significance: (1) the bootstrap; and (2) the jack-knife techniques. The jack-knife technique is a more cursory algorithm and the hypotheses are tested by assessing statistical significance of the path coefficients. The jack-knife technique is used to save resources and reduce execution time for large data sets (Chin, 2010).

165

Bootstrapping, on the other hand, represents a more exact calculation of measures (Mooney, 1996). This study uses the bootstrapping technique for testing the significance of all the path coefficients because in PLS analysis, bootstrapping is the only mechanism for examining the significance of path coefficients (Chin, 2010).

In PLS analysis, bootstrapping is used to evaluate the significance of model's path coefficients and estimate the standard error (Chin, 1998b). Bootstrapping is a non-parametric re-sampling procedure that involves repeated random sampling with replacement from the original sample (Efron & Tibshirani, 1993). It is a superior re-sampling method which attempts to approximate the sampling distribution of an estimator by re-sampling with replacement from the original sample (Good, 2000). Despite, the role of bootstrapping in PLS, the procedure is still not a standardized one as the user decides the number of bootstrap retrials to undertake based on peculiarity of the situation (Rasmussen, 1988). It was argued that insufficient number of retrials may create incorrect estimates of standard error, t-values, confidence intervals or conclusions in the test of hypotheses (Bontis *et al*., 2007). Important guidelines for the selection of the number of re-sampling are still being explored (Andrews & Buchinsky, 2002). However, in the present study, a total of 500 retrials were chosen for determining the significance of model's path coefficients and standard error as recommended by Chin (2010).

## 4.7    Descriptive Analysis of Constructs

The general statistical description of the constructs used in this study is examined by using the descriptive analysis. Statistical values of means, standard deviation,

minimum, and maximum were calculated for both the independent, mediating and dependent constructs. The results of these statistical values are displayed in Table 4.5. All the constructs have been measured on a seven point scale.

**Table 4.5**
*Descriptive Analysis of Constructs*

| Construct | N | Mean | Std. Dev | Minimum | Maximum |
|-----------|---|------|----------|---------|---------|
| Emotional healing | 325 | 4.74 | 1.39 | 1 | 7 |
| Creating value for the community | 325 | 4.82 | 1.37 | 1 | 7 |
| Conceptual skills | 325 | 5.81 | 0.95 | 2 | 7 |
| Putting subordinates first | 325 | 3.41 | 1.69 | 1 | 7 |
| Helping subordinates grow and succeed | 325 | 4.83 | 1.46 | 1 | 7 |
| Psychological ownership | 325 | 5.04 | 1.48 | 1 | 7 |
| OCB-I | 325 | 5.11 | 1.26 | 1 | 7 |
| OCB-O | 325 | 5.40 | 1.13 | 2 | 7 |

**Source: The Researcher**

The descriptive statistics of the servant leader behaviors reveal that the mean value for conceptual skills of 5.81 was relatively higher than the mean of the remaining four servant leader behaviors. The descriptive analysis also revealed that putting subordinates first has the lowest mean value of 3.41. The mean score of creating value for the community of 4.82 is relatively lower to the mean score helping subordinates grow and succeed of 4.83 but relatively higher to the mean score for emotional healing of 4.74. Furthermore, as indicated in Table 4.5, mean value for psychological ownership is demonstrated to be 5.04, while the descriptive analysis demonstrates that the mean value for the OCB-O of 5.40 exceeds the mean value for the OCB-I which is 5.11.

Having presented the descriptive analysis of the respondents and the respective constructs, next section presents results of PLS confirmatory factor analysis.

## 4.8    Measurement Scale and Research Variables

It may be worthy to provide analysis of the measurement scale vis-à-vis the type of research variables used in the present study. Scale is defined as a tool used in distinguishing individuals regarding how they are different from each other using some selected variables (Cavana *et al*., 2001).   Four major scales have been identified and are widely used in research; they are nominal, ordinal, interval and ratio. Cavana *et al*. (2001) have defined and presented each one of them individually in order of their sophistication.

First, nominal scale is defined as a measurement tool which allows researchers to categorize subjects into certain groups. For example, gender of respondents can be categorized into male and female. Second, ordinal scale, which is a scale that, in addition to categorizing subjects into certain groups, defines or rank-orders the subjects' categories in some meaningful ways. For example, a researcher may ask respondents to select by ranking the importance they place on five different characteristics of their jobs.  Third is interval scale, which is defined as a scale that allows researchers to perform some statistical operations on collected data. For example, it allows researchers to measure the distance between any two points on a particular scale. Thus, interval scale not only categorize subjects into certain groups and rank-order them, but in addition, it measures the extent of the differences in the preferences among research subjects. Fourth and final is ratio scale, which not only measures the extent or magnitude of the differences between points on a scale, it also measures to what extent are the differences. Thus, it is considered the most powerful among all the scales because it has a unique zero origin as against the arbitrary point found in the interval scale.

**Table 4.6**

*Descriptive Analysis of Data Type*

| Variables | Type of Scale |
|---|---|
| Emotional healing | Interval |
| Creating value for the community | Interval |
| Conceptual skills | Interval |
| Putting subordinates first | Interval |
| Helping subordinates grow and succeed | Interval |
| Psychological ownership | Interval |
| OCB-I | Interval |
| OCB-O | Interval |
| Gender | Nominal |
| Age | Ratio |
| Position of responsibility | Nominal |
| Experience | Nominal |
| Educational Qualification | Nominal |

**Source: The Researcher**

As exhibited in Table 4.6, the eight variables of the present study including emotional healing, creating value for the community, conceptual skills, putting subordinates first, helping subordinates grow and succeed, psychological ownership, OCB-I and OCB-O were measured using interval scale. It is important to note that Cavana *et al*. (2001) strongly argued that in business research the interval scale has been the conventional scale used in responding to questionnaires. However, regarding the five demographic variables used in this study, with exception of age, which was measured with ratio scale, the remaining four were measured with the nominal scale.

## 4.8    Results of Confirmatory Factor Analysis (CFA)

This section presents results of confirmatory factor analysis for this study using the PLS principal component analysis (PCA). All the constructs' measurements for the current study were adopted from previous authors; hence, there is no need for

exploratory data analysis (Hair *et al*., 2010). PLS CFA using the PLS-inbuilt principal component analysis is used to determine the structure of the constructs. The servant leadership construct is measured using the Liden *et al*'s (2008) 28-item measurement; and the psychological ownership construct is measured using the Pierce *et al*'s (2004) 7-item measurement. Finally the OCB construct is measured using the Williams and Anderson's (1991) 14-item measurement. After the confirmatory factor analysis using the PLS principal component analysis, out of the initial 49 items from the initial 10 constructs of this study, as indicated in Table 4.7 a total of 30 items and 8 constructs were retained for further analysis.

The main independent variable of this study is servant leadership. The construct of servant leadership was originally measured by 26 items of Liden *et al*.'s (2008) 7 dimensional instrument. After the PLS PCA 18 items and 5 constructs including conceptual skill, creating value for the community, emotional healing, helping subordinate grow and succeed and putting subordinate first were retained.

Specifically, eight (8) items were deleted for low or cross loading. Removing items with low loading increased the total variance explained. The compositions of the retained dimensions (constructs) have been explained individually in the following sections for better understanding.

Firstly, the conceptual skill factor was represented by 4 items including SL9, SL10, SL11 and SL12 that were related to manager/supervisor's ability to understand and solve complex problems. Specifically, these items consist of "my manager/supervisor can tell if something is going wrong in the organization", "my manager/supervisor is able to effectively think through complex problems", "my

manager/supervisor has a thorough understanding of our organization and its goals"

and "my manager/supervisor can solve work problems with new or creative ideas".

**Table 4.7**

*Constructs' Indicators*

| Indicator No. | Indicators | Constructs |
|---|---|---|
| SL1 | I would seek help from my manager if I had a personal problem | Emotional healing (EH) |
| SL2 | My manager/supervisor cares about my personal well-being. | |
| SL3 | My manager takes time to talk to me on a personal level. | |
| SL4 | My manager/supervisor can recognize when I'm in problem without asking me. | |
| SL5 | My manager/supervisor emphasizes the importance of giving back to the community. | Creating value for the community (CVC) |
| SL6 | My manager/supervisor is always interested in helping people in our community. | |
| SL7 | My manager/supervisor is involved in community activities | |
| SL8 | I am encouraged by my manager/supervisor to volunteer in the community. | |
| SL9 | My manager/supervisor can tell if something is going wrong in the organization | Conceptual skill (CS) |
| SL10 | My manager/supervisor is able to effectively think through complex problems, | |
| SL11 | My manager/supervisor has a thorough understanding of our organization and its goals | |
| SL12 | My manager/supervisor can solve work problems with new or creative ideas | |
| SL16 | My manager/supervisor provides me with work experiences that enable me to develop new skills. | Putting subordinate first (PSF) |
| SL17 | My manager/supervisor wants to know about my career goals, and | |
| SL18 | My manager/supervisor seems to care more about my success than his/her own. | |
| SL24 | When I have to make an important decision at work, I do not have to consult my manager/ supervisor first | Helping subordinate grows and succeed (HSGS) |
| SL25 | My manager/ supervisor makes my career development a priority | |
| SL26 | My manager/ supervisor is interested in making sure that I achieve my career goals | |
| OCB3 | I assist my supervisor with his/her work (when not asked). | Organizational citizenship behaviour for individuals (OCB-I) |
| OCB5 | I go out of the way to help new employees. | |
| OCB6 | I take a personal interest in co-workers. | |

**Table 4.7 (continued)**

| Indicator No. | Indicators | Constructs |
|---|---|---|
| OCB7 | I pass along information to co-workers. | |
| OCB8 | My attendance at work is above the norm. | Organizational |
| OCB10 | I take undeserved work breaks. | citizenship |
| OCB11 | I spend great deal of time in personal phone conversations. | behaviour for organization (OCB-O) |
| PO1 | This is MY organization. | Psychological |
| PO3 | I feel a very high degree of personal ownership for this organization. | ownership (PO) |
| PO4 | I sense that this organization is MY organization. | |
| PO5 | This is OUR organization. | |
| PO7 | It is hard for me to think about this organization as MINE. | |

**Source: The Researcher**

Secondly, creating value for the community factor reflecting manager/supervisor's strong interest on encouraging giving back and doing things that benefit the community was dominated by 4 items including SL5, SL6, SL7 and SL8. Specifically, these four items are: "my manager/supervisor emphasizes the importance of giving back to the community", "my manager/supervisor is always interested in helping people in our community", "my manager/supervisor is involved in community activities" and "I am encouraged by my manager/supervisor to volunteer in the community".

Thirdly, emotional healing factor reflecting the manager/supervisor's strong interest on the subordinate's interest was dominated by 4 items including SL1, SL2, SL3 and SL4. These four items include "I would seek help from my manager if I had a personal problem", "my manager/supervisor cares about my personal well-being", "my manager takes time to talk to me on a personal level" and "my manager/supervisor can recognize when I'm in problem without asking me".

Fourthly, putting subordinate first factor defined by the supervisor's commitment to care more the success of his subordinates more than his/her own personal success was dominated by 3 items including SL16, SL17 and SL18. Specifically, these three items are "my manager/supervisor provides me with work experiences that enable me to develop new skills", "my manager/supervisor wants to know about my career goals", and "my manager/supervisor seems to care more about my success than his/her own".

Fifthly, helping subordinate grow and succeed factor defined by the supervisor's commitment to ensure growth, development and success of his/her subordinates was dominated by 3 items including SL24, SL25, and SL26. Specifically, these three items consist of "when I have to make an important decision at work, I do not have to consult my manager/ supervisor first", my manager/ supervisor makes my career development a priority", and "my manager/ supervisor is interested in making sure that I achieve my career goals".

Next is the mediating variable of this study, which is psychological ownership (PO). The construct was originally a uni-dimensional construct and has been measured by 7 items (Van Dyne & Pierce, 2004). After the confirmatory factor analysis, the construct has retained its uni-dimensionality and 5 items only, indicating that only 2 items were deleted. The deleted items were those that indicated a sign of non fit with other items in their components. The retained 5 items include PO1, PO3, PO4, PO5, and PO7. Specifically, these five items are: "this is MY organization", "I feel a very high degree of personal ownership for this organization"; "I sense that this organization is MY organization", "this is OUR organization" and "it is hard for me to think about this organization as MINE".

Finally, the organizational citizenship behaviour (OCB) comprising of 14 items and 2 dimensions (OCB-I and OCB-O; Willians & Anderson, 1991) was subjected to PLS PCA. The CFA results indicate that the 2 dimensions and 7 items were retained for further analysis, indicating that only 7 items were deleted. The deleted items were those that indicated a sign of non fit with other items in their components. Firstly, the OCB-I component reflecting the subordinate's efforts toward helping individual organizational members was dominated by 4 items including OCB3, OCB5, OCB6 and OCB7. Specifically, these four items include: "I assist my supervisor with his/her work (when not asked)", "I go out of the way to help new employees", "I take a personal interest in co-workers" and "I pass along information to co-workers". Secondly, the OCB-O component reflecting the subordinate's efforts toward helping the whole organization was dominated by 3 items including OCB8, OCB10 and OCB11. Specifically, these three items include: "my attendance at work is above the norm", "I take undeserved work breaks" and "I spend great deal of time in personal phone conversations".

Having presented the results of confirmatory factor analysis using the PLS PCA indicating respective constructs and their indicators, next section builds on the previous discussion by presenting the actual results of constructs' validity for the study.

## 4.9    Constructs' Validity

Construct validity assesses the extent results obtained from the use of a measure fit the theories around which the test is designed (Sekaran, & Bougie, 2010). In other words, it is concerned with answering the question: does the instrument tap the

actual concept as theorized? To achieve the validity analysis, the measurement scales were subjected to three kinds of validity tests namely: content validity, convergent validity and discriminant validity (Tore, 2005).

Content validity measures the degree to which the scale items or indicators represent the domain of the concepts under study. Three experts from Universiti Utara Malaysia (UUM) including a Professor, an Associate Professor and a senior lecturer have examined the instrument for this study and have found it to be representative of the constructs under study. Thus, the selection of the measurement items was based on generally accepted procedures and recommendations designed to obtain content validity (Cronbach, 1951; Straub, 1989). It is therefore right to say that the measurement scales representing the main constructs of this study have satisfied the content validity criteria.

Convergence and discriminant validity are sub-categories of construct validity. It seeks agreement between a theoretical concept and a specific measuring instrument; it specifically examines whether the measurement scales represent and act like the attributes (Tore, 2005). In line with Hair *et al.*'s (2010) suggestion, the factor loadings, composite reliability and average variance extracted are used to assess convergence validity. Convergence validity is established if all the measures that purport to reflect a particular construct are indeed related.

As a convention, respective loadings and cross loadings are first to be assessed for detection of problems with any particular items and for being criteria for establishing convergence validity. Table 4.8 presents the loadings and cross loadings of indicators in the respective constructs of this study. The validity of a particular measurement scale is said to be convergent when indicators/items load

highly (i.e., > 0.5) on their associated constructs (Hair *et al*., 2010) and that no item loads more highly on another construct than the one it intends to measure (Barclay *et al*., 1995). In the present study, thirty (30) items have loaded adequately on their respective constructs and have all exceeded the recommended threshold value of 0.5 (Hair *et al*., 2010). Only seventeen (17) items were eliminated for significant cross loading and low loading. As indicated in Table 4.8, all the indicators loaded on their respective constructs from a lower bound of 0.72 to an upper bound of 0.99. Additionally, all the indicators loaded more highly on their respective constructs than on any other construct.

**Table 4.8**
*Factor Loadings and Cross Loadings*

| Indicators | EH | CVC | CS | PSF | HSGS | OCBO | OCBI | PO |
|---|---|---|---|---|---|---|---|---|
| SL1 | **0.783331** | 0.288049 | 0.246169 | 0.304947 | 0.294817 | 0.067607 | 0.252668 | 0.205543 |
| SL2_1 | **0.829790** | 0.293459 | 0.269914 | 0.339980 | 0.380939 | 0.020757 | 0.209167 | 0.285036 |
| SL3 | **0.767040** | 0.199904 | 0.146680 | 0.296050 | 0.286879 | 0.047595 | 0.245975 | 0.240056 |
| SL4 | **0.697560** | 0.290542 | 0.240890 | 0.388429 | 0.325579 | 0.052174 | 0.189663 | 0.211750 |
| SL5_1 | 0.334154 | **0.805124** | 0.378362 | 0.393866 | 0.370432 | 0.112837 | 0.005095 | 0.084686 |
| SL6 | 0.274944 | **0.860948** | 0.435869 | 0.325548 | 0.317107 | 0.091642 | 0.054046 | 0.108772 |
| SL7 | 0.233225 | **0.826977** | 0.393696 | 0.280057 | 0.298618 | 0.046818 | 0.036355 | 0.083188 |
| SL8 | 0.318915 | **0.828544** | 0.461260 | 0.340367 | 0.360559 | 0.091292 | 0.116347 | 0.126041 |
| SL9 | 0.229688 | 0.339762 | **0.722143** | 0.042085 | 0.163755 | 0.200643 | 0.186379 | 0.054497 |
| SL10_1 | 0.295903 | 0.457158 | **0.827611** | 0.167454 | 0.246700 | 0.122990 | 0.106104 | 0.165079 |
| SL11 | 0.259025 | 0.424813 | **0.878409** | 0.118858 | 0.269212 | 0.131824 | 0.123881 | 0.137382 |
| SL12 | 0.194755 | 0.420831 | **0.845060** | 0.165896 | 0.258286 | 0.116366 | 0.105035 | 0.130356 |
| SL16_1 | 0.379133 | 0.378154 | 0.187604 | **0.896450** | 0.484420 | 0.171616 | 0.259433 | 0.269083 |
| SL17 | 0.369866 | 0.333583 | 0.091240 | **0.920955** | 0.444433 | 0.153922 | 0.247780 | 0.269301 |
| SL18 | 0.419321 | 0.379745 | 0.138884 | **0.884629** | 0.465387 | 0.079105 | 0.186032 | 0.216885 |

**Table 4.8 (continued)**

| Indicators | EH | CVC | CS | PSF | HSGS | OCBO | OCBI | PO |
|---|---|---|---|---|---|---|---|---|
| SL24 | 0.372827 | 0.342553 | 0.247861 | 0.442974 | **0.946383** | 0.127419 | 0.167250 | 0.286119 |
| SL25_1 | 0.332848 | 0.347639 | 0.208318 | 0.486614 | **0.902652** | 0.111325 | 0.138864 | 0.229608 |
| SL26 | 0.410033 | 0.387949 | 0.310594 | 0.441696 | **0.802172** | 0.121642 | 0.199108 | 0.271010 |
| OCB8_1 | 0.007120 | 0.055897 | 0.091883 | 0.134093 | 0.075215 | **0.920829** | 0.289891 | 0.158702 |
| OCB10_1 | 0.066655 | 0.100407 | 0.187928 | 0.127894 | 0.118795 | **0.961894** | 0.296385 | 0.138556 |
| OCB11 | 0.093213 | 0.134983 | 0.192734 | 0.158002 | 0.186790 | **0.925009** | 0.313836 | 0.155136 |
| OCB3 | 0.329492 | 0.058952 | 0.202541 | 0.260118 | 0.180566 | 0.248731 | **0.807018** | 0.211323 |
| OCB5 | 0.185501 | 0.045544 | 0.032097 | 0.218018 | 0.151541 | 0.291134 | **0.759322** | 0.128190 |
| OCB6_1 | 0.259685 | 0.062528 | 0.153644 | 0.221648 | 0.174817 | 0.301044 | **0.986092** | 0.206990 |
| OCB7 | 0.259685 | 0.062528 | 0.153644 | 0.221648 | 0.174817 | 0.301044 | **0.986092** | 0.206990 |
| PO1 | 0.252808 | 0.158019 | 0.167882 | 0.245403 | 0.27231 | 0.104075 | 0.130043 | **0.828871** |
| PO3 | 0.283346 | 0.033307 | 0.059925 | 0.257758 | 0.240378 | 0.180716 | 0.222245 | **0.806400** |
| PO4 | 0.227012 | 0.111905 | 0.117619 | 0.21128 | 0.235917 | 0.104419 | 0.145814 | **0.877359** |
| PO5 | 0.296699 | 0.106702 | 0.154034 | 0.266499 | 0.28126 | 0.153408 | 0.199588 | **0.977198** |
| PO7 | 0.305744 | 0.131711 | 0.173288 | 0.265019 | 0.29425 | 0.169798 | 0.241167 | **0.975208** |

**Source: The Researcher**

*Note.* The bold and highlighted items identify the items that belong to the column's construct

Convergent validity for this study was additionally assessed using the average variance extracted measure (see Table 4.8). AVE is the average variance shared between a construct and its measures and that AVE for a construct should be greater than the variance shared between the construct and other constructs in a particular model (Couchman & Fulop, 2006). Average variance extracted was calculated using the following formula: $(\Sigma\lambda y_i^2)/((\Sigma\lambda y_i^2) + \Sigma Var(\epsilon_i))$. The rule of thumb is that an AVE value of 0.5 or higher is considered acceptable (Barclay, *et al*., 1995).

**Table 4.9**

*Convergence and Reliability Analysis*

| Construct | Items | Loadings | Composite Reliability | AVE |
|---|---|---|---|---|
| Emotional healing | SL1 | 0.78 | 0.85 | 0.60 |
| | SL2 | 0.83 | | |
| | SL3 | 0.77 | | |
| Creating value for the community | SL5 | 0.81 | 0.90 | 0.70 |
| | SL6 | 0.86 | | |
| | SL7 | 0.83 | | |
| | SL8 | 0.83 | | |
| Conceptual skills | SL9 | 0.72 | 0.89 | 0.67 |
| | SL10 | 0.83 | | |
| | SL11 | 0.88 | | |
| | SL12 | 0.85 | | |
| Putting subordinates first | SL16 | 0.90 | 0.93 | 0.81 |
| | SL17 | 0.92 | | |
| | SL18 | 0.88 | | |
| Helping subordinates grow and succeed | SL24 | 0.95 | 0.92 | 0.78 |
| | SL25 | 0.90 | | |
| | SL26 | 0.80 | | |
| OCB-I | OCB3 | 0.81 | 0.94 | 0.80 |
| | OCB5 | 0.76 | | |
| | OCB6 | 0.99 | | |
| | OCB7 | 0.99 | | |
| OCB-O | OCB8 | 0.92 | 0.96 | 0.88 |
| | OCB10 | 0.96 | | |
| | OCB11 | 0.93 | | |
| Psychological ownership | PO1 | 0.83 | 0.95 | 0.80 |
| | PO3 | 0.81 | | |
| | PO4 | 0.88 | | |
| | PO5 | 0.98 | | |
| | PO7 | 0.98 | | |

**Source: The Researcher**

*Note.* Composite reliability (CR) = (square of the summation of the factor loadings)/{(square of the summation of the factor loadings) + (square of the summation of the error variances)}b Average variance extracted (AVE) = (summation of the square of the factor loadings)/{(summation of the square of the factor loadings) + (summation of the error variances)}

Table 4.9 provides results of the AVE calculations with resultant coefficients that range from 0.60 to 0.88, indicating that convergence validity has been established for all the constructs. With the results of the convergence validity that demonstrated satisfactory item loadings, composite reliability, and satisfactory AVE coefficients for the individual items, it was evidently enough to confirm that the items/indicators represent distinct latent constructs, hence establishing their convergence validity.

Discriminant validity, on the other hand, concerns with whether measures that should not be related are actually not related. In an attempt to assess the discriminant validity, the square root of the AVE for each construct is used (Fornell, & Larcker, 1981). The square roots of AVE coefficients are then presented in the correlation matrix along the diagonal. The squared AVE should be greater than the squared correlation estimates to provide good evidence of discriminant validity (Hair *et al.*, 2006). More specifically, in order to establish adequate discriminant validity, the diagonal coefficients or elements must be greater than the off-diagonal coefficients or elements in the corresponding rows and columns.

Table 4.10 shows the results of the discriminant validity analysis of the constructs used in this study. Along the diagonal, the table shows square roots of AVE for all the constructs indicating a higher square roots of AVE for OCB-O (0.94), and lower for EH (0.77). However, all the square roots of AVE for the constructs are greater than the off-diagonal coefficients or elements in the corresponding rows and columns, thus, establishing an evidence of discriminant validity.

**Table 4.10**

*Discriminant Validity*

| Construct | CS | CVC | EH | HSGS | OCBI | OCBO | PO | PSF |
|-----------|------|------|------|------|------|------|------|------|
| CS | **0.82** | | | | | | | |
| CVC | 0.50 | **0.83** | | | | | | |
| EH | 0.30 | 0.35 | **0.77** | | | | | |
| HSGS | 0.29 | 0.41 | 0.42 | **0.89** | | | | |
| OCBI | 0.15 | 0.06 | 0.29 | 0.19 | **0.89** | | | |
| OCBO | 0.17 | 0.10 | 0.06 | 0.14 | 0.32 | **0.94** | | |
| PO | 0.15 | 0.12 | 0.31 | 0.30 | 0.21 | 0.16 | **0.90** | |
| PSF | 0.16 | 0.41 | 0.43 | 0.52 | 0.26 | 0.15 | 0.28 | **0.90** |

**Source: The Researcher**

*Note.* Diagonals that appeared in bold represent the average variance extracted while the other entries represent the squared correlations.

Generally, the results depicted in Tables 4.8, 4.9 and 4.10 demonstrate that measures for all the eight constructs including emotional healing, creating value for the community, conceptual skills, helping subordinates grow and succeed putting subordinates first, psychological ownership (PO), organizational citizenship behaviour for  individual (OCB-I) and organizational citizenship behaviour for organization (OCB-O) are valid measures of their respective constructs based on their parameter estimates and statistical significance (Chow & Chan, 2008).

Having presented the results of the measurement model for this study which indicated that the measures for all the constructs are reliable and valid, next step is to present results of the structural model. However, for logical understanding of the results for the structural model, the revised model for this study is presented first.

## 4.10    Revision of Proposed Theoretical Model

Before presentation of structural model involving main and mediating effects regarding the present study. As the initial proposed theoretical model has been modified, this section presents the revised theoretical framework for clearer understanding of the hypothesized relationships under investigation. The proposed model has been modified as a result of the CFA conducted, as discussed in previous sections. The PLS confirmatory factor analysis (CFA) has caused some changes in the earlier proposed model because of deletion of some indicators.

The old theoretical model has only one exogenous construct – servant leadership – and one endogenous construct – organizational citizenship behaviour, which were connected through a proposed mediating role of psychological ownership. The proposed initial servant leadership model consists of 7 constructs and 26 indicators that were adopted from Liden *et al*. (2008). Presently, only 5 constructs were retained. Regarding psychological ownership, the proposed initial model that was adopted from Van Dyne and Pierce (2004) was uni-dimensional and consisted of seven indicators. Currently, the revised psychological ownership construct retained the uni-dimensionality and only five observed manifest variables (indicators). Finally, the proposed initial organizational citizenship behaviour (OCB) model consists of 2 constructs (OCB-I, OCB-O) and 14 indicators that were adopted from Williams and Anderson (1991). No much change was witnessed in the revised model; the 2 constructs of OCB-I and OCB-O were retained, but with only 7 indicators.
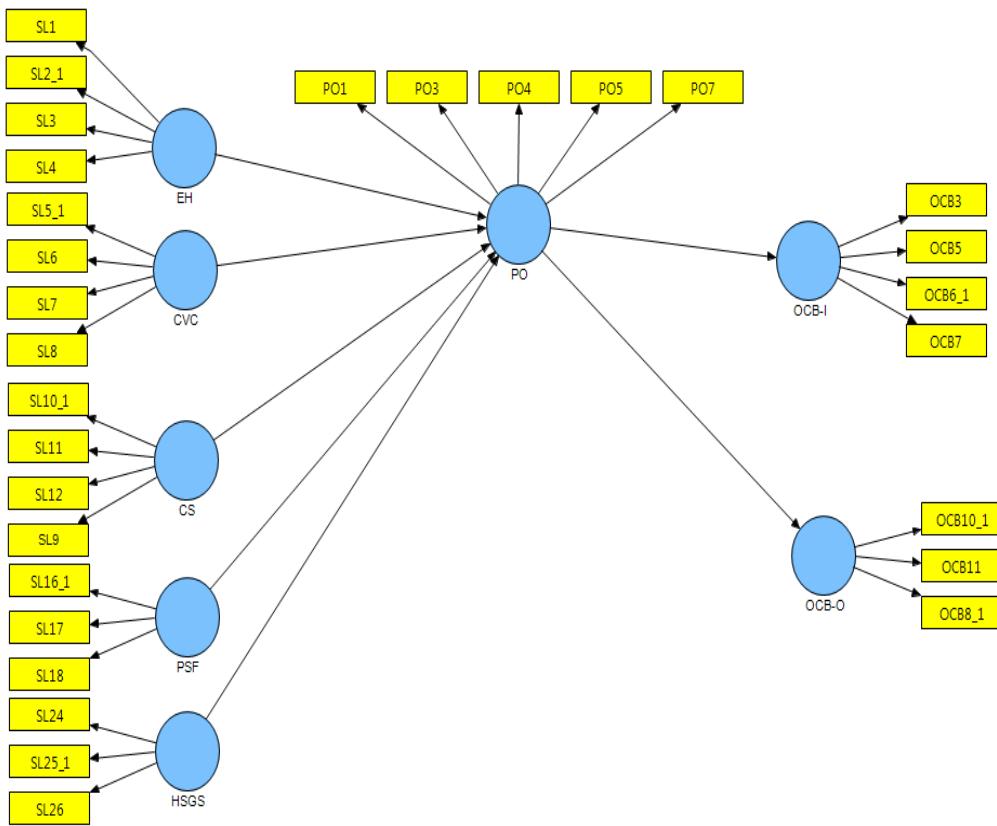
**Figure 4.1**
*Revised Model*

The revised model as shown in Figure 4.1 indicates the existence of a first order constructs of emotional healing (EH), creating value for the community (CVC), conceptual skills (CS), helping subordinates grow and succeed (HSGS), and putting subordinates first (PSF). The Figure 4.1 also indicates that construct CS, EH and CVC are each reflected by four manifest variables, while construct HSGS and PSF are each reflected by three manifest variables. Thus, the revised theoretical framework includes five exogenous variables (EH, CVC, CS, HSGS and PSF) and two endogenous variables (OCB-I, OCB-O) connected by one mediating variable of psychological ownership.

The revised framework provides for comprehensive and better understanding of dimensional effects of servant leadership on OCB dimensions through the psychological ownership construct.

Having highlighted the revised model for this study, next section presents preliminary analysis regarding an important PLS indicator called global fit measure (GoF).

## 4.11   Global Fit Measure (GoF)

Before presenting the results of the structural model, where main and mediating effects are presented, preliminary analysis regarding global fit measure (GoF) is presented. Results from this analysis help the current analysis by providing validating conclusions about the PLS structural model and providing positive signal for global application of the model.

Global fit measure (GoF) for the PLS path modelling is defined as the geometric mean of the average communality (outer measurement model) and the average R squared ($R^2$) for the endogenous constructs (Tenenhaus, Amato, Esposito, & Vinzi, 2004). Hence, GoF becomes an index for validating the PLS model globally using the performance of both measurement and structural models. More precisely, it is used to assess the overall fit of the model (Tenanhaus *et al.*, 2005), thus, the closer the GoF index to 1, the better the fit of the model under consideration.

To support the validity of the current PLS models, GoF value has been estimated according to the guidelines suggested by Wetzels, Odekerken-Schröder,

and Oppen (2009). Specifically, GoF for the models was calculated using the following formula:

$$GoF = \sqrt{\overline{R^2 x \ Average \ of \ Communality \ (\overline{AVE})}}$$

$$GoF = \sqrt{0.075 \ X \ 0.751 \ X \ 0.751}$$

$$GoF = 0.21$$

To guide for ascertaining the adequacy of global PLS model validity accurately, Wetzels *et al*. (2009) have provided baseline values as follows: (a) 0.1 equals to small, (b) 0.25 equals to medium and finally (c) 0.36 equals to large. The calculated GoF is 0.21, thus indicating the evidence of adequate global PLS model validity (Wetzels *et al*., 2009).

## 4.12   Structural Model

This section presents results of the structural model and tests of hypotheses for the study. Specifically, the section is concerned with testing of the hypotheses related to the main and mediating effects. Therefore, PLS path approach multiple regressions are conducted for the main effects. Furthermore, using the PLS bootstrapping output, the effects of mediating are calculated.

However, before presenting the main and mediating effects, or test of the hypotheses, the hypotheses are restated to reflect all constructs of the model.

## 4.13 Restatement of the Hypotheses

Before analysis of the results and test of the hypotheses, this section presents restated hypotheses to reflect changes in the composition of constructs' measurements experienced after confirmatory factor analysis earlier conducted. The retained dimensions of servant leadership comprise of emotional healing, creating value for the community, conceptual skills, helping subordinates grow and succeed putting subordinates first. In addition, the two OCB dimensions of OCB-I and OCB-O have been retained as initially hypothesized. Similarly, psychological ownership's uni-dimensionality has also been retained as initially hypothesized.

## 4.14 Main Effects' Hypotheses

Regarding the model for this study, seventeen main effect hypotheses have been formulated. The formulated hypotheses involve the relationships between emotional healing, creating value for the community, conceptual skills, helping subordinates grow and succeed, and putting subordinates first as the exogenous constructs, psychological ownership as the mediating construct and finally OCB-I and OCB-O as the endogenous variables:

H1a. Emotional healing (EH) is positively related to organizational citizenship behaviour benefiting the individuals (OCB-I).

H1b. Emotional healing (EH) is positively related to organizational citizenship behaviour benefiting the organization (OCB-O).

H1c. Creating value for the community (CVC) is positively related to organizational citizenship behaviour benefiting the individuals (OCB-I).

H1d.   Creating value for the community (CVC) is positively related to organizational citizenship behaviour benefiting the organization (OCB-O).

H1e.   Conceptual skill (CS) is positively related to organizational citizenship behaviour benefiting the individuals (OCB-I).

H1f.   Conceptual skill (CS) is positively related to organizational citizenship behaviour benefiting the organization (OCB-O).

H1g.   Helping subordinates grow and succeed (HSGS) is positively related to organizational citizenship behaviour benefiting the individuals (OCB-I).

H1h.   Helping subordinates grow and succeed (HSGS) is positively related to organizational citizenship behaviour benefiting the organization (OCB-O).

H1i.   Putting subordinates first (PSF) is positively related to organizational citizenship behaviour benefiting the individuals (OCB-I).

H1j.   Putting subordinates first (PSF) is positively related to organizational citizenship behaviour benefiting the organization (OCB-O).

H2a.   There is a significant relationship between emotional healing (EH) and psychological ownership (PO).

H2b.   There is a significant relationship between creating value for the community (CVC) and psychological ownership (PO).

H2c.   There is a significant relationship between conceptual skills (CS) and psychological ownership (PO).

H2d.   There is a significant relationship between helping subordinates grow and succeed (HSGS) and psychological ownership (PO).

H2e.   There is a significant relationship between putting subordinates first (PSF) and psychological ownership (PO).

H3a.   There is a significant relationship between psychological ownership (PO) and organizational citizenship behaviour benefiting the individual (OCB- I).

H3b.   There is a significant relationship between psychological ownership (PO) and organizational citizenship behaviour benefiting the organization (OCB-O).

## 4.15   Mediating Effects' Hypotheses

Similar to the above section, the ten mediating effects hypotheses (4a-4j) are formulated accordingly based on the results obtained from the PLS CFA as discussed earlier. Specifically, the hypotheses are concerned with the mediating effects of psychological ownership on the relationship between emotional healing, creating value for the community, conceptual skills, helping subordinates grow and succeed, putting subordinates first and two OCB constructs (i.e., OCB-I and OCB-O).

H4a.    Psychological ownership (PO) significantly mediates the relationship between emotional healing (EH) and organizational citizenship behavior benefiting the individual (OCB-I).

H4b.    Psychological ownership (PO) significantly mediates the relationship between creating value for the community (CVC) and organizational citizenship behavior benefiting the individual (OCB-I).

H4c.    Psychological ownership (PO) significantly mediates the relationship between conceptual skill (CS) and organizational citizenship behavior benefiting the individual (OCB-I).

H4d.    Psychological ownership (PO) significantly mediates the relationship between helping subordinates grow and succeed (HSGS) and organizational citizenship behavior benefiting the individual (OCB-I).

H4e.    Psychological ownership (PO) significantly mediates the relationship between putting subordinates first (PSF) and organizational citizenship behavior benefiting the individual (OCB-I).

H4f.    Psychological ownership (PO) significantly mediates the relationship between emotional healing (EH) and organizational citizenship behavior benefiting the organization (OCB-O).

H4g. Psychological ownership (PO) significantly mediates the relationship between creating value for the community (CVC) and organizational citizenship behavior benefiting the organization (OCB-O).

H4h. Psychological ownership (PO) significantly mediates the relationship between conceptual skill (CS) and organizational citizenship behavior benefiting the organization (OCB-O).

H4i. Psychological ownership (PO) significantly mediates the relationship between helping subordinates grow and succeed (HSGS) and organizational citizenship behavior benefiting the organization (OCB-O).

H4j. Psychological ownership (PO) significantly mediates the relationship between putting subordinates first (PSF) and organizational citizenship behavior benefiting the organization (OCB-O).

## 4.16  Main Effects

To understand the main relationship effects within the constructs, SEM PLS structural model analysis was conducted. The individual contribution of each exogenous variable is represented by the standardized beta values within the PLS structural model (Chin, 1998b). The present study is concerned with exploring the mediating effect of psychological ownership on the relationship between five servant leader behaviors (i.e., emotional healing, creating value for the community, conceptual skills, helping subordinates grow and succeed and putting subordinates first), and two OCB constructs (OCB-I and OCB-O).

Accordingly, the results of the main effects are in three main sections. First section presents main/direct relationships between the servant leader behaviors and OCB constructs (OCB-I and OCB-O). Second section presents main/direct relationships between servant leader behaviors and psychological ownership. Third section presents main/direct relationships between psychological ownership and OCB constructs (OCB-I and OCB-O). All the relationships are represented by standardized beta values. In testing the structural model relationships, the choice of significance level was set at $p<.05$ and $p<.01$ (Hair *et al.*, 2010).

### 4.16.1 Servant Leader Behaviors and OCBs

This section presents main effects results for servant leader behaviors and two OCB constructs (OCB-I and OCB-O) as earlier hypothesized. Table 4.11 shows the standardized path coefficient ($\beta$), standard error, t-values and decision taken. Similarly, Figures 4.2 and 4.3 graphically indicate standardized path coefficient ($\beta$) and t-values for the hypothesized relationships. As indicated in the figures and Table 4.10, six out of the ten direct relationships between the five servant leader behaviors and two OCB constructs have demonstrated significant positive effects. Therefore, four paths have demonstrated non-significant effects.

The six significant relationships include: (1) emotional healing (EH) and OCB-I ($\beta= 0.222$; t= 3.266, $p<.001$); (2) creating value for the community (CVC), and OCB-I ($\beta= -0.183$; t= 2.061, $p<.020$); (3) conceptual skills (CS) and OCB-I ($\beta= 0.169$; t= 2.520, $p<.006$); (4) conceptual skills (CS) and OCB-O ($\beta= 0.194$; t= 2.692, $p<.004$); (5) putting subordinates first (PSF) and OCB-I ($\beta= 0.213$; t= 3.133,

p<.001); and finally (6) putting subordinates first (PSF) and OCB-O (β= 0.143; t= 1.885, p<.030).

**Table 4.11**
*Results for Servant Leader Behaviors, OCB-I and OCB-O*

| Path Coefficients | Beta (β) | Standard Error | T Statistics | Decision |
|---|---|---|---|---|
| EH -> OCBI | 0.222** | 0.068 | 3.362 | Supported |
| EH -> OCBO | -0.056 | 0.061 | 0.894 | Not Supported |
| CVC -> OCBI | -0.183* | 0.089 | 2.153 | Not Supported |
| CVC -> OCBO | -0.045 | 0.076 | 0.598 | Not Supported |
| CS -> OCBI | 0.169** | 0.067 | 2.796 | Supported |
| CS -> OCBO | 0.194** | 0.072 | 2.755 | Supported |
| HSGS -> OCBI | 0.022 | 0.068 | 0.328 | Not Supported |
| HSGS -> OCBO | 0.058 | 0.069 | 0.814 | Not Supported |
| PSF -> OCBI | 0.213** | 0.068 | 3.092 | Supported |
| PSF -> OCBO | 0.143* | 0.076 | 1.970 | Supported |

**Source: The Researcher**
*Note.* ** Indicates the item is significant at the p<0.01 level. * Indicates the item is significant at the p<0.05 level

In the first place the results indicate that under a condition of emotional healing leader behaviour, followers show strong citizenship behaviors towards colleagues or their supervisors (β= 0.222; t= 3.362, p<.000). In other words, whenever a leader exhibits genuine concern for personal well-being of his/her followers, the followers reciprocate strongly by helping co-workers or even supervisors to accomplish job tasks or fix their personal problems. Secondly, the results also demonstrate that when a leader exhibits genuine concern for community well-being and development, followers react by reducing their citizenship behaviors toward colleagues or supervisors (β= -0.183; t= 2.153, p<.016).
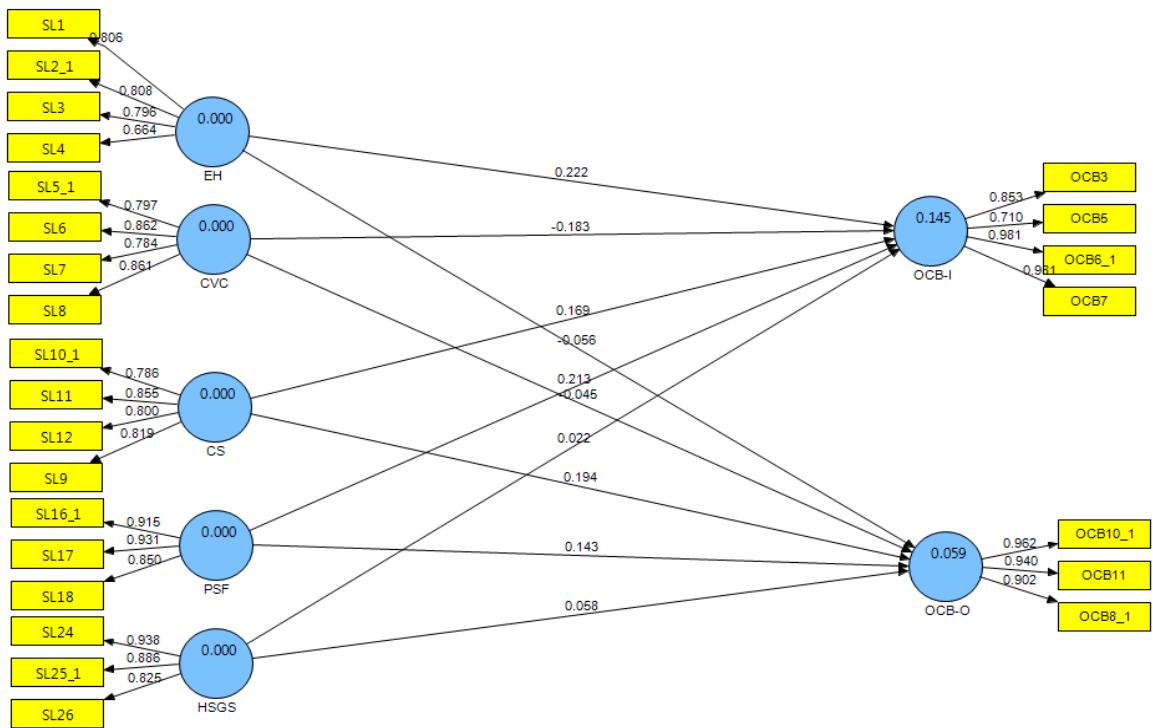
**Figure 4.2**
*PLS Algorithm Graph for S L Behaviors, OCB-I and OCB-O*
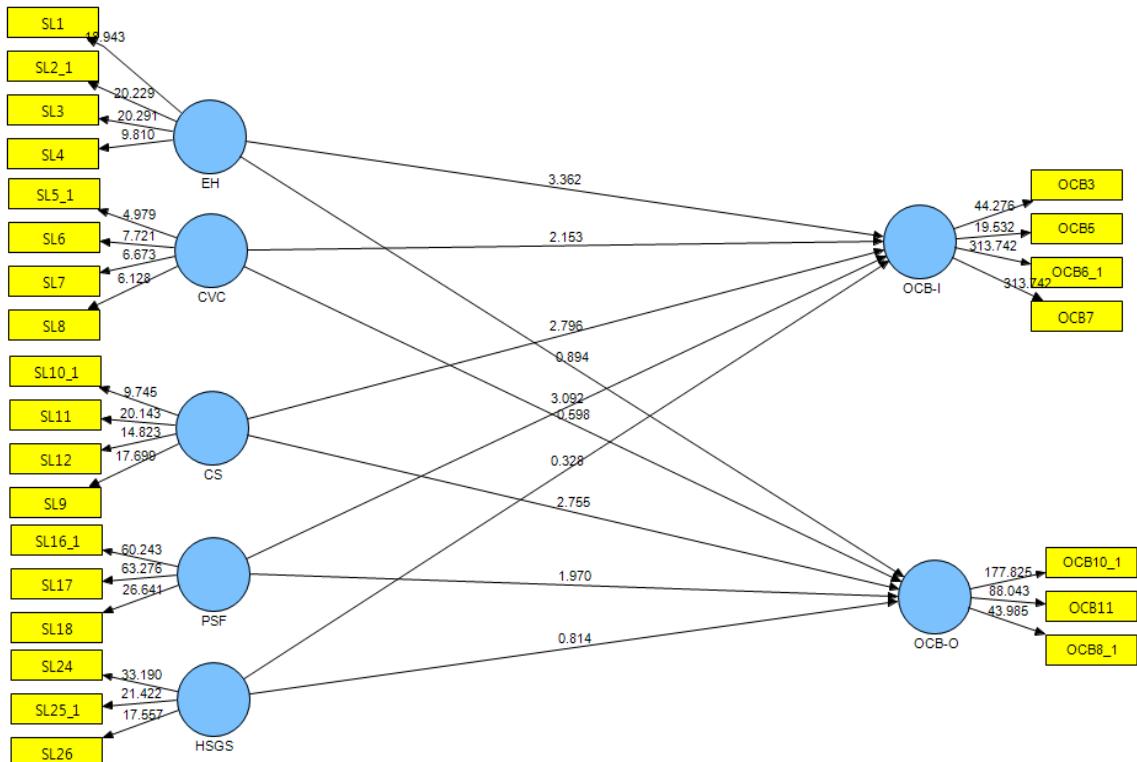


**Figure 4.3**
*PLS Bootstrap Graph for SL Behaviors, OCB-I and OCB-O*

Thirdly, results have also demonstrated that the servant leader behaviour of conceptual skills (CS) strongly influence employee citizenship behaviors that benefit the individual employees (β= 0.169; t= 2.796, p<.003). In other words, employees perform OCB that benefit individual employees (OCB-I) when a leader or supervisor exhibit his/her ability to understand and solve complex organizational problems. Fourthly, and similar to the previous results, results have also demonstrated that the servant leader behaviour of conceptual skills (CS) strongly influence employee citizenship behaviors that benefit the whole organization (β= 0.194; t= 2.755, p<.003). Furthermore, employees perform OCB that benefit the whole organization (OCB-O) when a leader or supervisor exhibits his/her ability to understand and solve complex organizational problems for the employees (conceptual skills). Examples of OCB-O include offering useful suggestion for improvement, outstanding work performance, protecting organizational image, perseverance when facing apparent difficulties etcetera. Fifthly, results have demonstrated that the servant leader behaviour of putting subordinates first (PSF) do significantly and positively influence employees to perform OCBs that benefit individual employees (β= 0.213; t= 3.092, p<.001). The results, thus indicate that when supervisors demonstrate high level consideration of subordinates' interests involving leader's personal sacrifices, prioritizing interests of followers, and considering followers' interest first, the followers in return respond with strong level of OCB-I. Similarly, and finally, results have also indicated that putting subordinates first (PSF) also leads to moderate level of citizenship behaviors that benefit the whole organization (β= 0.143; t= 1.970, p<.024).

Importantly, the results demonstrate that among the five predictors of OCB-I, emotional healing (EH) has the highest significant standardized beta coefficient ($\beta$= 0.222), which indicates that the predictor is the most important variable in predicting the OCB-I. Similarly, among the five predictors of OCB-O, conceptual skill (CS) has the highest significant standardized beta coefficient ($\beta$= 0.194), which indicates that conceptual skill is the most important variable in predicting the OCB-O. Additionally, the results reveal that conceptual skill influences OCB-O ($\beta$= 0.194) more than it does influence OCB-I ($\beta$= 0.169). This differential influence is not surprising because a positive leader behaviour that affects an organization's operation by improving skills of employees may likely be a catalyst for increased OCB toward the organization.

The non-significant paths concerning the servant leader behaviors, OCB-I and OCB-O include: (1) emotional healing and OCB-O ($\beta$= -0.056; t= 0.894, p<.186); (2) creating value for the community and OCB-O ($\beta$= -0.045; t= 0.598, p<.275); (3) helping subordinates grow and succeed and OCB-I ($\beta$= 0.022; t= 0.328, p<.371); (4) helping subordinates grow and succeed and OCB-O ($\beta$= 0.058; t= 0.814, p<.208). Elaborately, the non-significant results demonstrate that: (1) leader behaviour which focuses on care for subordinates' well-being (emotional healing), does not produce significant effect on OCB-O; (2) leader behaviour directed at caring for the community interest (creating value for the community) did not have any significant relationship with OCB-O. The not significant relationships between creating value for the community and OCB-O is not surprising results because community interest behaviour has no direct benefit or bearing on the individual employees or the organization as a whole. Creating value for the community as

servant leader behaviour directly benefit people outside the organization. Hence, it might be difficult for any significant influence on OCB to take place; (3) leader behaviour directed at helping subordinates grow and succeed also did not show any significant effect on both OCB-I; (4) Finally, helping subordinates grow and succeed also did not show any significant effect on OCB-O.

Generally, insignificant results regarding relationships between helping subordinates grow and succeed and the two OCB constructs appear to be unexpected and surprising. This result appears surprising because the exhibited positive servant leader behaviors were expected to spark off positive retaliatory behaviors (Blau, 1964), including OCB-I and OCB-O.

Summarily, whilst hypotheses H1a, H1c, H1e, H1f, H1i, and H1j are supported, hypotheses H1b, H1d, and H1g, and H1h are not supported and, therefore, rejected.

### 4.16.2  Servant Leader Behaviors and Psychological Ownership

As indicated in Table 4.12 and Figures 4.4, and 4.5, four of the five hypothesized relationships regarding the servant leader behaviors and psychological ownership were demonstrated to be significant. Three of the four significant relationships appear to be positively and strongly significant. These include: (1) emotional healing (EH) and psychological ownership (PO; $\beta$= 0.191; t= 2.878, p<.002); (2) helping subordinates grow and succeed and psychological ownership ($\beta$= 0.161; t= 2.311, p<.010); and (3) putting subordinates first and psychological ownership ($\beta$= 0.149; t= 2.294, p<.011). One of the four significant relationships appear to be negatively significant ($\beta$= -0.113; t= 1.740, p<.041).

**Table 4.12**

*Servant Leader Behaviors and Psychological Ownership*

| Hypotheses | Beta (β) | Standard Error | T Statistics | Decision |
|---|---|---|---|---|
| EH -> PO | 0.191** | 0.066 | 2.878 | Supported |
| CVC -> PO | -0.113* | 0.065 | 1.740 | Not Supported |
| CS -> PO | 0.090 | 0.065 | 1.377 | Not Supported |
| HSGS -> PO | 0.161** | 0.070 | 2.311 | Supported |
| PSF -> PO | 0.149* | 0.065 | 2.294 | Supported |

**Source: The researcher**

*Note.* ** Indicates the item is significant at the p<0.01 level. * Indicates the item is significant at the p<0.05 level

Elaborately, the PLS results reveal that four relationships are differentially significant (see Table 4.12). The differential significant influence of the servant leader behaviors on the followers' psychological ownership may be justifiable on the basis of the followers' perception about them. That is positive servant leader behaviors that directly and particularly affect followers should attract higher positive reactions from the followers than if the leader positive behaviors were directed toward others within or outside their organization (CVC). In other words, emotional healing, helping subordinates grow and succeed, as well as putting subordinates first might have had strong significant influence on followers' psychological ownership than creating value for the community because the former behaviors affect the followers directly rather than indirect.
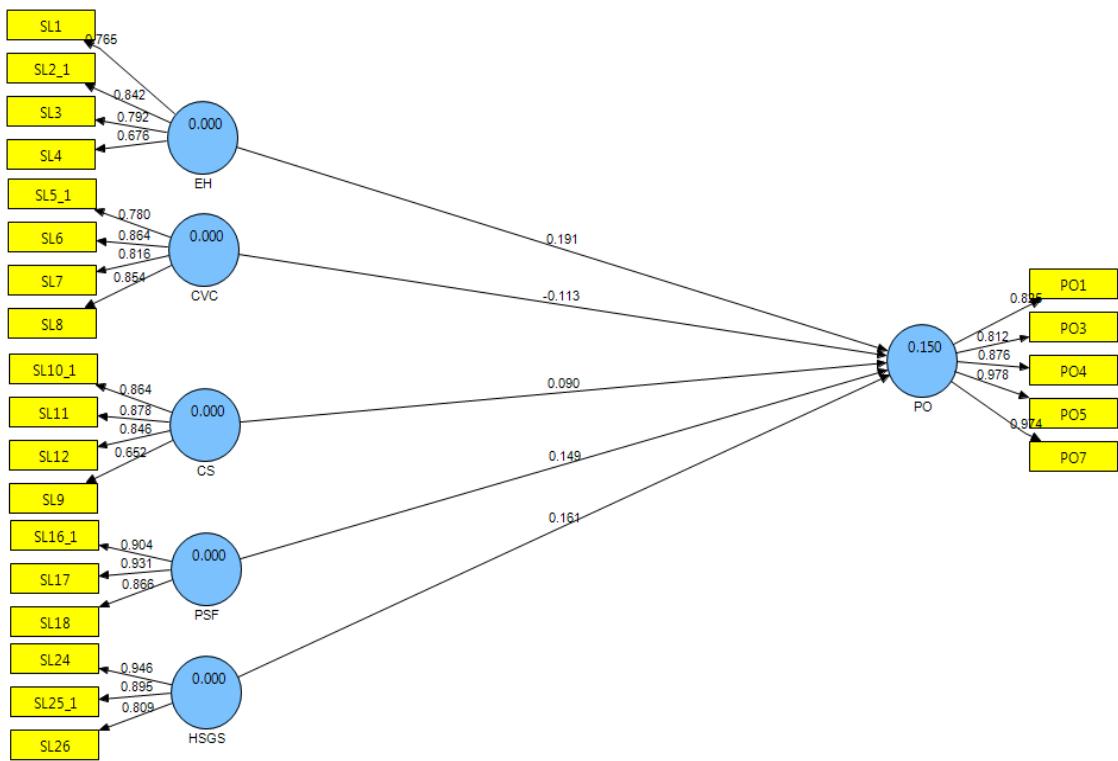
**Figure 4.4**
*PLS Algorithm for SL Behaviors and PO*
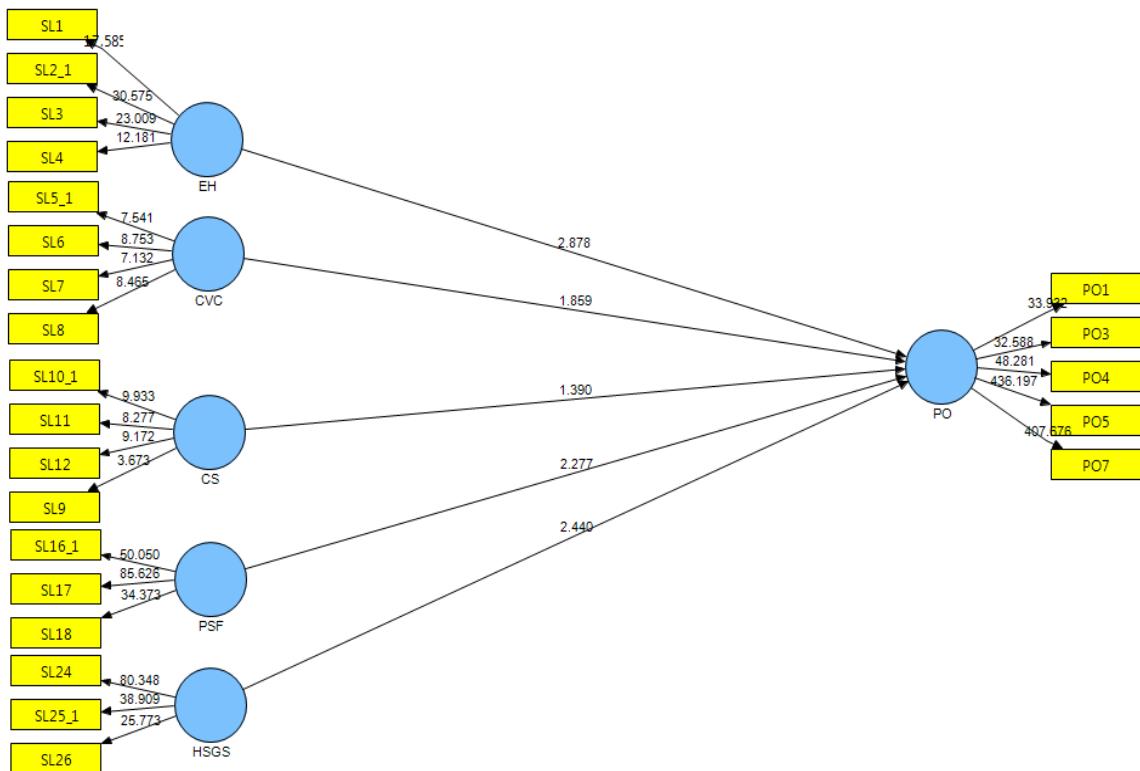


**Figure 4.5**
*PLS Bootstrap Graph for SL Behaviors and PO*

Specifically, results also demonstrate that when a leader exhibits concern for his/her followers' well-being (i.e. emotional healing), the followers respond by showing a high sense of ownership feelings toward their organization (psychological ownership). Additionally, results demonstrate that a leader's behaviors toward helping people in his/her community, leader's actual involvement in community activities and giving encouragement to followers to volunteer in the community (creating value for the community) create a rather negative effect among the followers' feelings of ownership for their organization. Next, results also demonstrate that when a leader exposes his subordinates to continuous learning, and useful experiences about their career (helping subordinates grow and succeed), the followers would positively and strongly respond by showing ownership feeling for their organization. Subordinates may show ownership feelings by exhibiting positive behaviors such as optimal utilization of their talents and energy as well as encouraging co-workers to do same. Finally, the results also demonstrate that a leader's behaviour that gives concern for and prioritizes subordinates/followers' interests (i.e. putting subordinates first) also strongly and positively influence the followers to develop a feeling as if the organizations they work for is their own (psychological ownership). Therefore, from the five hypothesized relationships between servant leader behaviors and psychological ownership, four hypotheses including H2a, H2b, H2d and H2e are empirically supported and, therefore, accepted. However, only one hypothesis (i.e. H2c) is not supported and is, therefore, rejected.

### 4.16.3 Psychological Ownership and OCBs

Next, results presented in this section are concerned with the relationships between psychological ownership and the two OCB constructs (OCB-I and OCB-O). As indicated in Table 4.13 and Figures 4.6, and 4.7. PLS results demonstrate that psychological ownership is significantly related to both OCB-I (β= 0.223; t= 4.242, p<.000) and OCB-O (β= 0.167; t= 2.841, p<.002) positively and strongly.

**Table 4.13**
*Psychological Ownership and OCBs*

| Hypotheses | Beta (β) | Standard Error | T Statistics | Decision |
|---|---|---|---|---|
| PO -> OCBI | 0.223** | 0.053 | 4.242 | Supported |
| PO -> OCBO | 0.167** | 0.059 | 2.841 | Supported |

**Source: The Researcher**

*Note*. ** Indicates the item is significant at the p<0.01 level. * Indicates the item is significant at the p<0.05 level
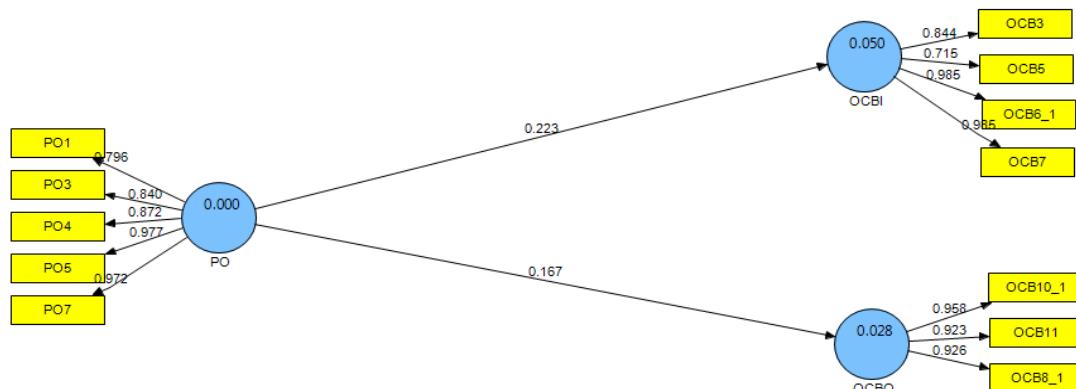


*Figure 4.6*
*PLS Algorithm Graph for PO, OCB-I and OCB-O*
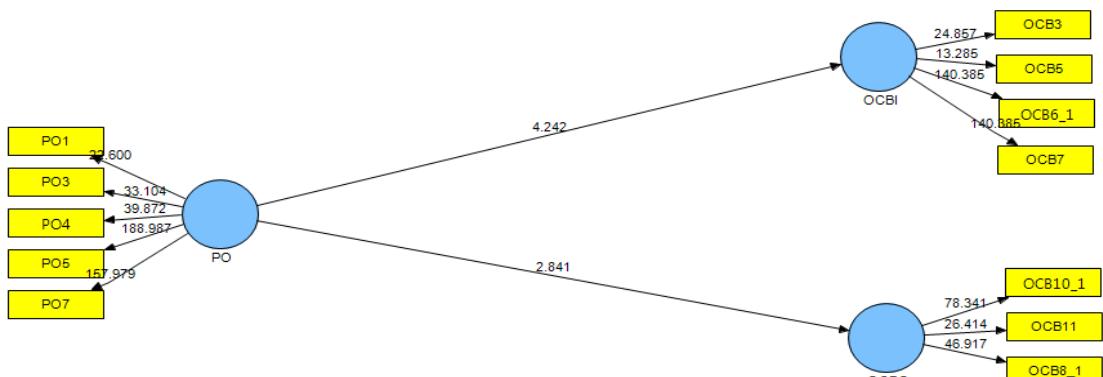
*Figure 4.7*
*PLS Bootstrap Graph for PO, OCB-I and OCB-O*

In the case of psychological ownership and OCB-I relationship, the results demonstrate that when employees or subordinates experience psychological ownership for their organization, they are motivated to behave in some ways to assist their co-workers and supervisors solve both job and personal problems. Similarly, in the case of psychological ownership and OCB-O, the results demonstrate that when employees or subordinates experience psychological ownership for their organization, they are motivated to behave in some ways to assist the organization achieve its goals, succeed and grow. In other words, employees become elated when they feel the organization they work in *'is as if is their own'* and in return perform their jobs beyond the formal requirements.

Generally, the results suggest that if employees feel as if the organization belongs to them, they will more likely tap and utilize their potentials to the fullest for the goal achievement of both their co-workers, supervisors and the organization as a whole. Hence, results of the current study establish that experiencing a sense for the organization by employees strongly and positively increase performance of employee citizenship that benefit both individuals (OCB-I) and the organization as a whole (OCB-O). Therefore, as initially hypothesized, all the two hypotheses (H3a

200

and H3b) regarding the relationships between psychological ownership for their organization and the OCBs (OCB-I and OCB-O) are strongly empirically supported and, therefore, accepted.

Having presented results of the main effects and the related test of hypotheses, the next thing is to present the analysis of mediating effects and the attendant test of hypotheses.

## 4.17 Analysis of Mediation Effects

Mediation test is conducted to find if a mediator variable can significantly carry the influence of an independent variable to a dependent variable (Ramayah *et al.*, 2011). In other words, mediation test assesses the indirect effect of the independent variable on the dependent variable through a mediator variable. Hayes and Preacher (2010) observe that mediation analysis in multivariate analysis is achieved through many techniques including: (1) simple techniques that consist of the causal steps approach (Baron & Kenny, 1986) or the Sobel test (Sobel, 1982); (2) newer approaches that demand just fewer unrealistic statistical assumptions. These include the distribution of the product method (MacKinnon, Lockwood, & Williams, 2004), and re-sampling approaches such as bootstrapping (Bollen & Stine, 1990; MacKinnon *et al.*, 2004; Preacher & Hayes, 2004, 2008; Shrout & Bolger, 2002).

Importantly, the mediation test used for this study was based on the PLS approach, thus the hypotheses for the study were tested using the partial least squares (PLS) structural equations modeling (SEM) technique (Wold, 1985). The PLS SEM technique is increasingly gaining prominence and acceptance by leadership researchers (for e.g., House, Spangler, & Woycke, 1991; Howell &

201

Avolio, 1993) because it is suitable for testing complex multivariate main and indirect effects models like those in the present study. Although, PLS is popularly associated with smaller sample size (Preacher & Hayes, 2004), the technique is also used to make inferences about parameters in studies involving large sample size (Starkweather, 2011) like the case of the current study. Bootstrap is the PLS procedure used in this study to evaluate the statistical significance of relevant path coefficients. In PLS analysis, bootstrapping represents a more exact calculation of measures (Chin, 2010).

Although, PLS uses path analysis and treats direct and indirect effects simultaneously, like other mediation techniques (for e.g., Baron, & Kenny, 1986), there is yet no mechanism for treating mediating models simultaneously. Specifically, the PLS technique has no formal detailed guidelines for mediation tests (Bontis, Booker, & Serenko, 2007). PLS method provides only guidelines for determining if mediation among certain variables exists, other details regarding whether the mediation is partial or full still remains unresolved. However, the PLS SEM technique has been reported to be a particularly well suited technique for mediation study (Bontis *et al*., 2007; Chin, 1998b; Hair, Ringle, & Sarstedt, 2013, 2013; Hayes & Preacher, 2010; Iacobucci *et al.,* 2007).

### 4.17.1 The Direct and Indirect Effects

This section presents results regarding the PLS structural direct and indirect effects before presenting the actual mediation effects for this study. Indirect effects are defined as the summation of both direct and indirect effects between two particular constructs (Albers, 2010). Additionally, Hayes and Preacher (2010) argued that

indirect effect is concerned with the influence of X on Y through an intervening variable M. It is quantified as the product of paths "*a*" and "*b*" and is interpreted as the quantity that Y is expected to change as X changes as a result of X's effect on M which, in turn, influences Y (Hayes & Preacher, 2010).

In PLS model, before actual mediation is determined, presenting the total effects is crucial because it gives a comprehensive picture of the mediating constructs' role, and as well provides insights to practitioners about cause-effect relationships (Hair *et al.,* 2013). Similarly, Preacher and Hayes (2004) argued that mediating effects are first determined by indirect effects of exogenous constructs on the endogenous constructs through a proposed mediating construct.

Regarding the OCB-I construct, the results of the indirect analysis as displayed in Table 4.14 and Figures 4.8 and 4.9 indicated indirect association between most of the servant leader behaviors and the OCB-I construct. Specifically, the results indicate significant indirect relationship between emotional healing and OCB-I ($\beta$= 0.042; t= 2.294, p<.011), helping subordinates grow and succeed and OCB-I ($\beta$= 0.035; t= 2.129, p<.017), as well as putting subordinates first and OCB-I ($\beta$= 0.033; t= 1.847, p<.032). However, two servant leader behavior constructs of conceptual skills and creating value for the community have failed to demonstrate any sign of indirect association with endogenous variables of OCB-I.

**Table 4.14**
*Direct and Indirect Effects*

| Paths | Beta (β) | Standard Error | T Statistics |
|---|---|---|---|
| CS -> OCB-I | 0.019 | 0.016 | 1.184 |
| CS -> OCB-O | 0.015 | 0.013 | 1.119 |
| CS -> PO | 0.089 | 0.063 | 1.406 |
| CVC -> OCB-I | -0.025 | 0.016 | 1.624 |
| CVC -> OCB-O | -0.019 | 0.012 | 1.614 |
| CVC -> PO | -0.115 | 0.061 | 1.878 |
| EH -> OCB-I | 0.042 | 0.018 | 2.294 |
| EH -> OCB-O | 0.032 | 0.015 | 2.065 |
| EH -> PO | 0.193 | 0.063 | 3.035 |
| HSGS -> OCB-I | 0.035 | 0.017 | 2.129 |
| HSGS -> OCB-O | 0.026 | 0.013 | 2.038 |
| HSGS -> PO | 0.161 | 0.064 | 2.517 |
| PO -> OCB-I | 0.219 | 0.053 | 4.115 |
| PO -> OCB-O | 0.164 | 0.053 | 3.078 |
| PSF -> OCB-I | 0.033 | 0.018 | 1.847 |
| PSF -> OCB-O | 0.025 | 0.014 | 1.801 |
| PSF -> PO | 0.150 | 0.065 | 2.302 |

**Source: The Researcher**

Regarding the indirect relationships between servant leader behavior constructs and OCB-O construct, the results have demonstrated similar patterns. Table 4.14 indicates indirect relationship between emotional healing and OCB-O ($\beta$= 0.032; t= 2.065, p<.019), helping subordinates grow and succeed and OCB-O ($\beta$= 0.026; t= 2.038, p<.021), as well as putting subordinates first and OCB-I ($\beta$= 0.025; t= 1.801, p<.036). However, conceptual skills and creating value for the community have also failed to demonstrate any sign of indirect association with endogenous variables of OCB-O.
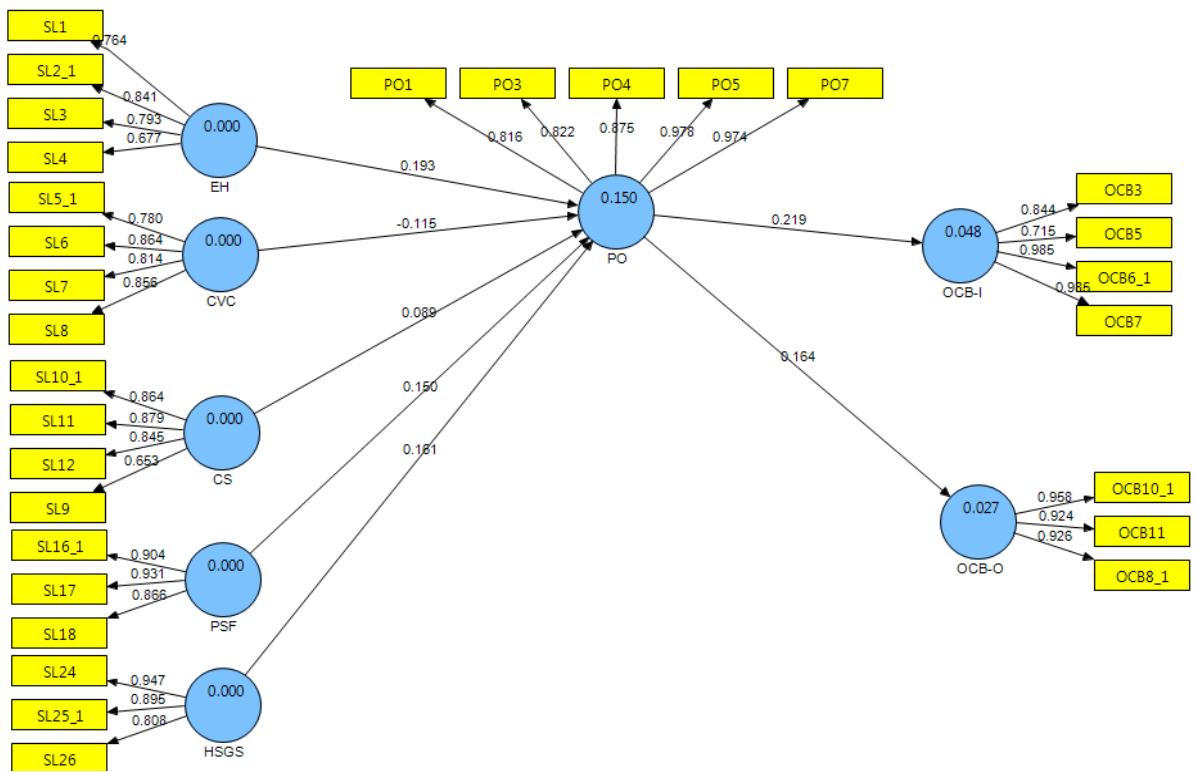
**Figure 4.8**
*PLS Algorithm for SL Direct & Indirect Effects on OCB-I and OCB-O*
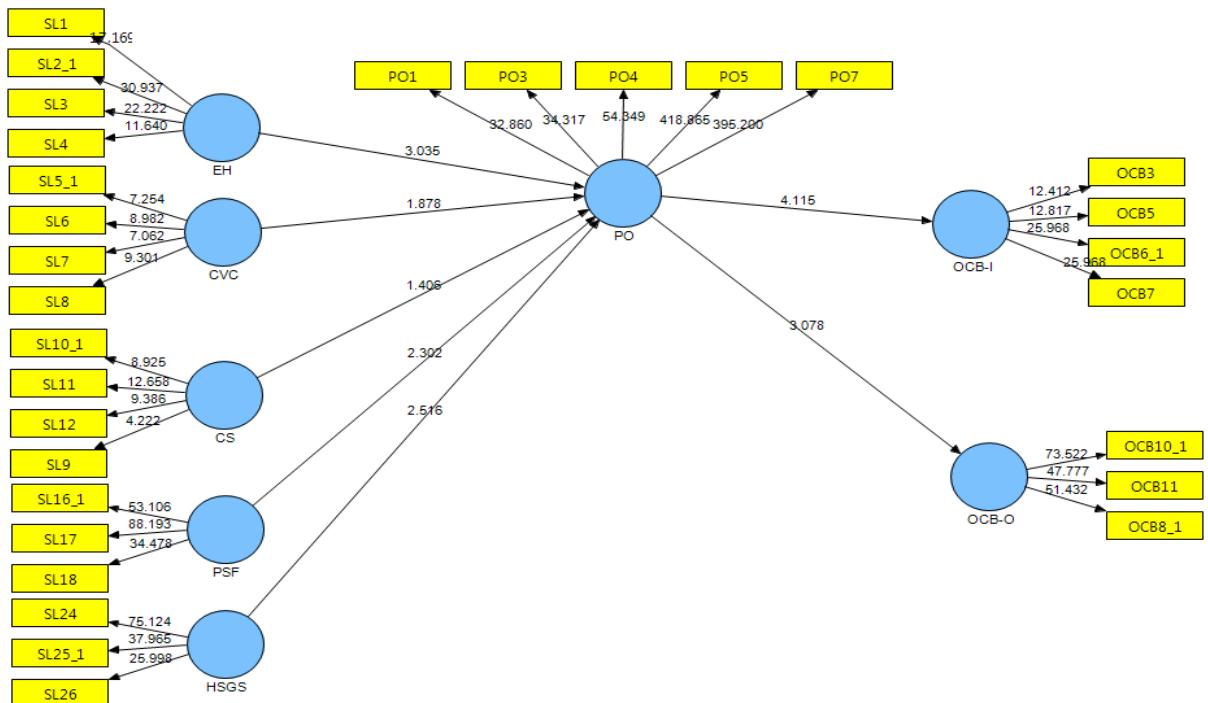


**Figure 4.9**
*PLS Bootstrap SL Direct & Indirect Effects on OCB-I and OCB-O*

Thus, results of the indirect effects as shown in Table 4.14 and depicted in Figures 4.8 and 4.9 demonstrate a mixture of significant and not significant indirect effects; therefore, indicating potential mixed mediating effects of psychological ownership on the relationship between servant leader behaviour constructs (emotional healing, helping subordinates grow and succeed, and putting subordinates first) and OCB constructs (OCB-I and OCB-O).

After analysis of the indirect effects within the PLS structural model, next sections present the actual results of the mediation tests for all the ten proposed mediating models.

### 4.17.2  Mediation Results

The actual mediation effect in PLS model is determined by means of bootstrapping analysis in tandem with formulated hypotheses (Hair *et al.,* 2013). Specifically, mediation is determined by multiplying the average of paths "*a*" and "*b*" and then dividing the obtained value by the standard error of the paths (Kock, 2013) as shown in this formula: $T = \frac{a \, X \, b}{S(a \, X \, b)}$ . Thus, this formula was used to determine the mediating effects of psychological ownership on all the ten relationships of this study.

In the formula, *"a"* represents the direct path between predictor variables (emotional healing, conceptual skills, creating value for the community, helping subordinates grow and succeed, and putting subordinates first); and *"b"* represents the path between psychological ownership and the criterion variables (OCB-I and OCB-O). Both paths *a* and *b* must be obtained from the PLS bootstrapping to ascertain the significance of their coefficients and standard error (Hair *et al.,* 2013;

(Kock, 2013). Finally, *"S"* represents the standard deviation of paths *a* and *b*. Generally, in PLS bootstrap mediation calculation, *"T"* represents the significance coefficient. Mediation is established if T value is equal to or greater than 1.96 at 0.05 significance level using two tail test, or 1.64 at 0.05 significance level using one-tail test (Hair et al., 2010).

Generally, the mediation tests for this study were conducted to: (1) find if psychological ownership could mediate the relationship between five servant leadership behaviors (EH, CVC, CS, HSGS and PSF) as exogenous variables and OCB-I as an endogenous variable; (2) find if psychological ownership could mediate the relationship between the same five servant leadership behaviors (EH, CVC, CS, HSGS and PSF) and OCB-O as another endogenous variable.

Accordingly, results of the ten proposed mediational relationships/models are divided into two and presented as such for convenience purposes. First section presents the mediational results concerning the relationships between EH, CVC, CS, HSGS, PSF constructs and OCB-I construct. While second section presents the mediational results concerning the relationships between EH, CVC, CS, HSGS, PSF constructs and OCB-O construct. as another endogenous variable. However, details regarding the results can be found in Appendix F.

### 4.17.2.1 Mediation Results for OCB-I Models

As stated in the previous section, this section present results of the PLS bootstrap regarding the mediating effect of psychological ownership on the relationship between emotional healing (EH), conceptual skills (CS), creating value for the

community (CVC),  helping subordinates grow and succeed (HSGS), putting
subordinates first (PSF) and OCB-I.

**Table 4.15**
*Mediation Results for OCB-I Model*

| Hypotheses | a*b Coefficient | Std Dev | T Value | Decision |
|---|---|---|---|---|
| CS>PO>OCB-I | 0.112 | 0.115 | 0.973 | Not Supported |
| CVC>PO>OCB-I | -0.022 | 0.016 | -1.379 | Not Supported |
| EH>PO>OCB-I | 0.044** | 0.019 | 2.318 | Supported |
| HSGS>PO>OCB-I | 0.035* | 0.018 | 1.995 | Supported |
| PSF>PO>OCB-I | 0.033* | 0.018 | 1.827 | Supported |

**Source: The Researcher**
*Note.* Values are calculated using PLS bootstrapping routine with 325 cases and 500 samples.
**indicates the item is significant at the $p<0.01$ level and * indicates the item is significant at the
$p<0.05$ level

From Table 4.15, results demonstrate that three out of the five hypothesized
meditational relationships have proven to be statistically and moderately significant,
indicating mediating effect of psychological ownership. Moreover, the results have
indicated that psychological ownership (PO) has statistically failed to mediate the
relationship between: (1) conceptual skills (CS) and OCB-I; and (2) creating value
for the community (CVC) and OCB-I. The three statistically proven mediated
models as shown in Table 4.15 include: (1) emotional healing (EH) and OCB-I; (2)
helping subordinates grow and succeed (HSGS) and OCB-I; and lastly (3) putting
subordinates first (PSF) and   OCB-I.

Firstly, regarding the emotional healing (EH) and OCB-I model, results
demonstrate strong statistical evidence of mediating effect of the psychological
ownership (PO) construct on the relationship between emotional healing (EH) and
OCB-I ($\beta$= 0.044; t= 2.318, p<.010). Secondly, regarding the helping subordinates
grow and succeed (HSGS) and OCB-I model, results have also demonstrated strong

mediating effect of the psychological ownership (PO) construct on the relationship between helping subordinates grow and succeed (HSGS) and OCB-I ($\beta$= 0.035; t= 1.995, p<.023). Thirdly, regarding the putting subordinates first (PSF) and OCB-I model, the results have demonstrated moderate mediating effect of the psychological ownership (PO) construct on the relationship between putting subordinates first (PSF) and OCB-I ($\beta$= 0.033, t= 1.827, p<.034). However, results demonstrate that among the three significant hypothesized meditational models, psychological ownership more strongly mediates the relationship between emotional healing (EH) and OCB-I ($\beta$= 0.044; t= 2.318, p<.010).

### 4.17.2.2      Mediation Results for OCB-O Models

Having presented the results for five mediated OCB-I models in last section, using the same process of PLS bootstrap, this section presents results of the mediating effect of psychological ownership on the relationship between the servant leader behaviors and OCB-O. Specifically, this section presents results regarding the mediating effect of psychological ownership on the relationship between emotional healing (EH), conceptual skills (CS), creating value for the community (CVC), helping subordinates grow and succeed (HSGS), putting subordinates first (PSF) and OCB-O.

Similar to the OCB-I mediated models, in the OCB-O mediated models as indicated in Table 4.16, results have demonstrated that three out of the five hypothesized meditational relationships have proven to be statistically and moderately significant, indicating mediating effect of psychological ownership. However, the results have indicated that psychological ownership has statistically

failed to mediate the relationship between: (1) conceptual skills and OCB-O; and (2) creating value for the community and OCB-O. The three statistically proven mediated models as shown in Table 4.16 include: (1) emotional healing and OCB-O; (2) helping subordinates grow and succeed and OCB-O; and lastly (3) putting subordinates first and OCB-O.

**Table 4.16**
*Mediation Results for OCB-O Models*

| Hypotheses | a*b Coefficient | Std Dev | T Value | Decision |
|---|---|---|---|---|
| CS>PO>OCB-O | 0.015 | 0.014 | 1.083 | Not Supported |
| CVC>PO>OCB-O | -0.016 | 0.012 | -1.341 | Not Supported |
| EH>PO>OCB-O | 0.032* | 0.016 | 2.039 | Supported |
| HSGS>PO>OCB-O | 0.025* | 0.014 | 1.879 | Supported |
| PSF>PO>OCB-O | 0.024* | 0.014 | 1.709 | Supported |

**Source: The Researcher**
*Note.* Values are calculated using PLS bootstrapping routine with 325 cases and 500 samples.
**indicates the item is significant at the $p<0.01$ level, and * indicates the item is significant at the $p<0.05$ level

Firstly, regarding the emotional healing and OCB-O model, results have demonstrated strong statistical evidence of mediating effect of the psychological ownership construct on the relationship between emotional healing and OCB-O ($\beta$= 0.032; t= 2.039, p<.021). Secondly, regarding the helping subordinates grow and succeed, and OCB-O model, results have also demonstrated moderate mediating effect of the psychological ownership construct on the relationship between helping subordinates grow and succeed, and OCB-O ($\beta$= 0.025; t= 1.879, p<.030). Thirdly, regarding the putting subordinates first and OCB-O model, the results have demonstrated moderate mediating effect of the psychological ownership construct on the relationship between putting subordinates first and OCB-O ($\beta$= 0.024, t=

1.709, p<.044). Specifically, results demonstrate that among the three significant hypothesized meditational models, psychological ownership more strongly mediates the relationship between emotional healing and OCB-O ($\beta$= 0.032; t= 2.039, p<.021). Generally, the results demonstrate that among the five servant leader behaviors, emotional healing is mediated more strongly than the remaining servant leader behaviors by psychological ownership in both the OCB-I ($\beta$= 0.044; t= 2.318, p<.010), and OCB-O ($\beta$= 0.032; t= 2.039, p<.021) models. The presented mediation results demonstrate that most of the hypotheses including H4a, H4d, H4e, H4f, H4i, and H4j are supported, while hypotheses H4b, H4c, H4g and H4h are not supported, hence are rejected.

Having presented all the results including the main and mediating effects, next and the last section of this chapter presents general summary of the findings as depited in Table 4.17. The Table presents summary of the findings in relation to the tested hypotheses of this study.

## 4.18    Summary of findings

Generally, self reporting technique has provided appreciable support in assessing the relationship between servant leadership behaviors and OCB constructs (OCB-I and OCB-O) through the mediating effect of psychological ownership. With minor modifications, the PLS confirmatory factor analysis (CFA) has confirmed the structural composition of the three constructs (servant leadership, psychological ownership and organizational citizenship behaviors). Using the PLS technique, the multivariate analysis has statistically provided evidence of predictive relevance and the importance of psychological ownership as a good mechanism through which

servant leadership influences employees' OCB-I and OCB-O. Specifically, results from PLS analysis have provided support for most of the hypotheses for this study.

Findings reveal twelve significant main effects affecting the relationship between: (1) emotional healing (EH) and OCB-I; (2) creating value for the community (CVC) and OCB-I; (3) conceptual skill (CS) and OCB-I; (4) conceptual skill (CS) and OCB-O; (5) putting subordinates first (PSF) and OCB-I; (6) putting subordinates first (PSF) and OCB-O; (7) emotional healing (EH) and psychological ownership (PO), (8) creating value for the community (CVC) and psychological ownership (PO); (9) helping subordinates grow and succeed (HSGS) and psychological ownership (PO); (10) putting subordinates first (PSF) and psychological ownership (PO); (11) psychological ownership (PO) and OCB- I; and (12) psychological ownership (PO) and OCB-O. However, two of the significant effects/relationships: (1) creating value for the community (CVC) and OCB-I; and (2) creating value for the community (CVC) and psychological ownership (PO), were not supported and, therefore, rejected because of their negative relationships which did not tally with their formulated hypotheses.

Importantly, regarding the mediating effects of psychological ownership on the relationship between the five servant leader behaviors and employee citizenship behaviors (OCB-I and OCB-O), the PLS bootstrap results have demonstrated that six of the ten formulated hypotheses are significant. These significant mediating relationships include: (1) emotional healing (EH) and organizational citizenship behaviour benefiting the benefiting the individual (OCB-I); (2) helping subordinates grow and succeed (HSGS) and organizational citizenship behaviour benefiting the individual (OCB-I); (3) putting subordinates first (PSF) and organizational

citizenship behaviour benefiting the individual (OCB-I); (4) emotional healing (EH), and organizational citizenship behaviour benefiting the organization (OCB-O); (5) helping subordinates grow and succeed (HSGS) and organizational citizenship behaviour benefiting the organization (OCB-O); and finally (6) putting subordinates first (PSF) and organizational citizenship behaviour benefiting the organization (OCB-O).

**Table 4.17**
*Summary of Hypotheses Testing*

| Hypothesis | Statement | Decision |
|---|---|---|
| H1a. | Emotional healing (EH) is significantly related to organizational citizenship behaviour benefiting the individuals (OCB-I). | Supported |
| H1b. | Emotional healing (EH) is significantly related to organizational citizenship behaviour benefiting the organization (OCB-O). | Rejected |
| H1c. | Creating value for the community (CVC) is significantly related to organizational citizenship behaviour benefiting the individuals (OCB-I). | Not Supported |
| H1d. | Creating value for the community (CVC) is significantly related to organizational citizenship behaviour benefiting the organization (OCB-O). | Rejected |
| H1e. | Conceptual skills (CS) is significantly related to organizational citizenship behaviour benefiting the individuals (OCB-I). | Supported |
| H1f. | A conceptual skill (CS) is significantly related to organizational citizenship behaviour benefiting the organization (OCB-O). | Supported |
| H1g. | Helping subordinates grow and succeed (HSGS) is significantly related to organizational citizenship behaviour benefiting the individuals (OCB-I). | Rejected |
| H1h. | Helping subordinates grow and succeed (HSGS) is significantly related to organizational citizenship behaviour benefiting the organization    (OCB-O). | Rejected |
| H1i. | Putting subordinates first (PSF) is significantly related to organizational citizenship behaviour benefiting the individuals (OCB-I). | Supported |
| H1j. | Putting subordinates first (PSF) is significantly related to organizational citizenship behaviour benefiting the organization (OCB-O). | Supported |

**Table 4.17 (continued)**

| Hypothesis | Statement | Decision |
|---|---|---|
| H2a. | There is a significant relationship between emotional healing (EH) and psychological ownership (PO). | Supported |
| H2b. | There is a significant relationship between creating value for the community (CVC) and psychological ownership (PO). | Not Supported |
| H2c. | There is a significant relationship between conceptual skills (CS) and psychological ownership (PO). | Rejected |
| H2d. | There is a significant relationship between helping subordinates grow and succeed (HSGS) and psychological ownership (PO). | Supported |
| H2e. | There is a significant relationship between putting subordinates first (PSF) and psychological ownership (PO). | Supported |
| H3a. | There is a significant relationship between psychological ownership (PO) and organizational citizenship behaviour benefiting the individual    (OCB- I). | Supported |

# CHAPTER FIVE

# DISCUSSION

## 5.1    Introduction

In the previous chapter the findings of this study were presented. The objective of this chapter is to discuss the results of the study in the context of the research questions, hypotheses and literature review. The chapter is organized into four major parts. The first section discusses the summary of the results. On the basis of the results' pattern, the second session discusses the findings in the light of the tested hypotheses and literature review. The third section discusses the implications of the current findings and future research directions. The fourth section presents the limitations of this study. Finally the fifth section discusses conclusion of the study.

## 5.2    Summary of Findings

This study is to assess the mediating effect of psychological ownership on the relationship between five servant leadership behaviors constructs including emotional healing (EH), creating value for the community (CVC), conceptual skills (CS), helping subordinates grow and succeed (HSGS), and putting subordinates first (PSF), as well as two organizational citizenship constructs that includes OCB-I and OCB-O. Towards this end, 27 hypotheses representing the constructs' dimensional relationships were developed. The results provided empirical support for 16 hypotheses including the main and mediating effects. The next section discusses the findings in relation to previous findings and theories.

**5.3     Discussion of Results**

This section discusses results concerning all the direct relationships between: (1) servant leader behaviors as exogenous variables and OCB-I as a endogenous variable; (2) servant leader behaviors as exogenous variables and OCB-O as a endogenous variable; and finally (3) servant leader behaviors as exogenous variables and psychological ownership as a endogenous variable.

**5.3.1     Direct Effects of Servant Leader Behaviors on OCB-I**

In this study, organizational citizenship behaviour refers to the level of employee positive voluntary behaviour that benefits the individuals (OCB-I [Williams & Anderson, 1991]). In relation to servant leader behaviors and OCB-I of utility sector organizations, this study found that four servant leader behaviors including emotional healing, creating value for the community, conceptual skills and putting subordinates first have significant relationships with the overall OCB-I. Only one servant leader behaviour, namely, helping subordinates grow and succeed does not significantly relate to the overall performance of employee OCB-I.

Emotional healing is defined as an individual's ability to provide emotional support to an employee who fails at a task, dream or relationship (Spears, 1996). It is the ability of an individual to recognize when and how to provide emotional support to others (Barbuto & Wheeler, 2006). Leaders who employ the use of emotional healing are great listeners and highly empathetic. They also provide work environment that is safe for employees to express personal and professional issues. Hypothesis H1a of this study states that emotional healing (EH) is significantly related to organizational citizenship behaviour benefiting the individuals (OCB-I).

As expected, the finding provides support for the hypothesis. As supervisors/managers increase the level of emotional healing toward their subordinates, the subordinates, in turn, respond by increasing their helping behaviors toward co-workers and supervisors. The reciprocal employees' behaviour is consistent with social exchange (Blau, 1964). Social exchange theory emphasizes that individuals are psychologically indebted and hence compelled to return benefits they received in material or non-material form to the person that benefited them (Blau, 1964). However, the positive relationship is also consistent with social learning theory (Bandura, 1977), which states that whatever behaviors people exhibit are learnt from the environment. In the current study, participants might have demonstrated OCB-I in an attempt to emulate the supervisors' extra efforts toward emotional counselling, preaching the gospel of patience and rekindling of hope and confidence among subordinate employees (i.e. emotional healing). Therefore, because supervisors expend extra efforts outside the formal job contract to help subordinates solve technical and complex work problems, employees learn similar behaviors by expending extra efforts to help the organization (OCB-O). This finding corroborates with most of the past servant leadership-OCB studies (Ehrhart, 2004; Hu & Liden, 2011; Liden *et al*., 2008; Vondey, 2010; Neubert *et al*., 2008).

Creating value for the community (CVC) is a servant leader behaviour demonstrating the leader's unlimited liability for a specific community-related activity that is needed to rebuild the community (Greenleaf, 1972). Hypothesis H1c states that creating value for the community (CVC) is significantly related to organizational citizenship behaviour benefiting the individuals (OCB-I). Contrary to

expectation, a negative and significant relationship was found. Hence, hypothesis H1c was not supported.

In this context, the current findings significantly differ from the previous studies (Liden *et al*., 2008; Vondey, 2010) that found a positive relationship. One plausible explanation for the present finding may be related to economic and cultural orientations of the respondents who belong to two extreme contexts. It is obvious that affluence, social integration and overall economic growth and development found in the United States, in which many previous studies were conducted, far outweigh those in the underdeveloped nations like Nigeria. Against that background, when corporate leaders in the US commit time and resources of the organization to develop and benefit the surrounding community, followers/subordinates would in turn be motivated to exhibit positive extra-role behaviors directed at the leader or co-workers (OCB-I). But in Nigeria, corporate leaders' efforts to spend and develop the community in which they operate will be met with counter reactions from the employees. They may see community development activities as a waste of resources because they cannot see any direct benefit to themselves or the organization. The negative relation between creating value for the community and OCB-I may also be related to the wrong perception that management is prioritizing the community more than it does to issues concerning the employees or the organization. Supportive to this analysis is the argument of equity theory (Adams, 1965). Equity theory stresses that if individuals perceive actions of a party of interest to be unfair, tension will be created that the employee will be motivated to address (Ramlall, 2004). Therefore, in the case of this study, the participants might consider reducing their loyalty and

cooperativeness to the management (OCB-I) as a protest for paying increasing attention to community development by the management.

Conceptual skill is defined as a supervisor's ability to possess the knowledge of the organization and tasks at hand in order to effectively support and assist subordinates and others within the organization (Liden *et al*., 2008). Hypothesis H1e of this study states that conceptual skill (CS) is significantly related to organizational citizenship behaviour benefiting the individuals (OCB-I). The current findings provided empirical support for the hypothesis and are, thus, consistent with past studies (Ehrhart, 2004; Hu & Liden, 2011; Liden *et al*., 2008; Neubert*et al*., 2008; Walumbwa *et al*., 2011). Greenleaf (1977) argues that if leaders serve their followers, the followers will be inspired to serve others. Similarly, and consistent with social learning theory (Bandura, 1977), Organ *et al*. (2006) propose that followers who experience servant leadership behaviors such as (1) see their leaders helping subordinates to develop; (2) see their leaders provide personal support to their followers; and (3) see their leaders show genuine interest in their followers will be motivated to model the leader by delivering service and benefit to others.

Additionally, in line with social exchange theory, when a person does a favour for another person, there is an expectation of some future favourable return (Blau, 1964). It is likely that the organizational citizenship behaviour that benefit individuals (OCB-I) shown by the participants in the current study is an appreciation of the leadership treatment they might have been receiving from their supervisors. In fact, it is expected that the participants drawn from technically based

organizations demonstrate organizational citizenship behaviour that benefit individuals (OCB-I) as a result of the conceptual skills of their supervisors.

Helping subordinates grow and succeed is a behavior that demonstrates genuine concern for subordinates' career growth and development through mentoring and other supportive services (Liden *et al*., 2008). Hypothesis H1g states that helping subordinates grow and succeed (HSGS) is significantly related to organizational citizenship behaviour benefiting the individuals (OCB-I). However, results demonstrate that the relationship is not significant, contrary to the expectation as suggested by social exchange theory (Blau, 1964) and social learning theory (Bandura, 1977). The current findings demonstrate that helping subordinates grow and succeed does not directly influence the overall employee OCB of utility organizations in Nigeria. This finding is inconsistent with previous studies (Ehrhart, 2004; Hu & Liden, 2011; Liden *et al*., 2008; Neubert *et al*., 2008; Walumbwa *et al*., 2011). The insignificant result may suggest that the positive leader behaviour of helping subordinates grow and succeed is seen as mere impression management. Impression management is defined as behaviour by an individual aimed at controlling or manipulating the perceptions and attributions formed about the individual by others (Tedeschi & Reiss, 1981). In other words, impression management consists of behaviors initiated by an individual to establish a particular identity or shape people's attributions of the individual's dispositions (Jones, & Pittman, 1982). Impression management suggests that the primary motive, both within and outside the organization, for a particular behaviour, is to win support and avoid negative evaluation (Rosenfeld, Giacalone, & Riordan, 1995). It might be possible that employees perceive the helping behaviour of their leaders to be

220

unnatural, artificial, and manipulative and, therefore, becomes of no effect on their behaviour. In addition, the insignificant relationship between helping subordinates grow and succeed and OCB-I might be a result of the weak inter-correlation values between the helping subordinates grow and succeed construct and OCB-I construct. All this could explain why the relationship was insignificant (Sekaran, 2003).

Putting subordinates first is defined as a leader's use of words and actions to clearly convince the immediate followers that their work needs are the leader's priority (Liden *et al*., 2008). Hypothesis H1i states that putting subordinates first (PSF) is significantly related to organizational citizenship behaviour benefiting the individuals (OCB-I). As expected, the current findings validated the hypothesis by providing strong empirical support. The finding is similar to that of previous studies (Ehrhart, 2004; Hu & Liden, 2011; Liden *et al*., 2008; Neubert *et al*., 2008; Walumbwa *et al*., 2011). This finding, like the previous positive findings discussed in this section, is consistent with the tenets of both social exchange (Blau, 1964) and social learning theory (Bandura, 1977). The finding is positive because employees that participated in this study value managers' behaviors that appear to favour their yearnings and aspirations first before anyone else's in the organization. The finding means that the leader behaviour of putting subordinates first directly and positively relates to employee OCB-I. The more the leader demonstrates the behaviour the more employees exhibit OCB-I. It is not surprising for putting subordinates first to enhance OCB-I as demonstrated in this finding because naturally people are motivated to reciprocate good with good (Blau, 1964). Therefore, the positive relationship between putting subordinates first and OCB-I might be because of the leaders' show of care and concern to build and develop

subordinates even at the expense of the leaders' own interests. It was demonstrated that leaders who behave humbly in service to their organization, appreciate the gifts and talents of subordinates and empower the subordinates are eventually compensated by the subordinates. The subordinates will respond with behaviors including organizational citizenship behaviors (OCBs) by helping each other, participating in various activities, taking initiative and taking responsibility to continuously develop each other as potential leaders of their organizations (Greenleaf, 1977; Shekari & Nikooparvar, 2012).

Having discussed the findings regarding the direct relationships found in the OCB-I model, in a similar fashion, the following section discusses findings about the direct relationships in the OCB-O model.

### 5.3.2   Direct Effects of Servant Leader Behaviors on OCB-O

In relation to servant leader behaviors and OCB-O of utility sector organizations, this study found that two servant leader behaviors including conceptual skills and putting subordinates first showed significant relationships with the overall employee OCB-O of utility sector organizations in Nigeria. On the other hand, three servant leader behaviors, namely, emotional healing, creating value for the community and helping subordinates grow and succeed did not show signs of significant relationship with overall performance of employee OCB-O.

Firstly, hypothesis H1b of this study states that emotional healing (EH) is significantly related to OCB-O. The results demonstrate that the relationship between emotional healing and OCB-O is not significant. Specifically, the present finding matches Liden *et al.*'s (2008) study in which association between emotional

healing and community citizenship behaviors of 153 supervisor–subordinate dyads from some selected organizations in the United States was demonstrated to be not significant. Community citizenship is akin to OCB-O, hence, important for comparison in the current study. Community citizenship is concerned with employee becoming committed to the organization, performing at higher levels and becoming more active in providing services in the community in which the organization operates (Liden *et al*., 2008). The findings demonstrate that emotional healing has completely no effect on the employees' willingness to exhibit citizenship behaviors beneficial to the organization. That is, no matter how supervisors try in providing emotional healing to subordinates, their behaviors will have no effect on performance of employee OCB-O. Liden *et al*. (2008) did not go further to make analysis of why no significant relationship between emotional healing and community citizenship.

A good rationale for the non significant effect of emotional healing on OCB-O is that servant leader behaviors such as show of compassion which could be a correlate of emotional healing, is not easily responded to by followers as more concrete behaviors such as prioritizing employee interest, or helping employee to grow and succeed (Vondey, 2010). Additionally, the non-significant effect might be because emotional healing is a complex and difficult task (Strauch, 1991). In line with this argument, for supervisors to positively influence OCB-O through emotional healing they need to recognize when and how to provide emotional support to subordinates, as wel,l supervisors have to be great listeners and highly empathetic (Barbuto & Wheeler, 2006). In the case of the present study, it might be possible that the supervisors have failed to demonstrate the necessary behaviors for

effective emotional healing among their subordinates that could yield positive reactions. Moreover, because emotional healing comes after subordinates' unfortunate experience of difficulty or failure (Spears, 1996), the no significant effect of emotional healing behaviour on OCB-O might be because of a subordinate's grudges for his/her personal woes labelled on the organization or management of the organization. The subordinates might be partly blaming the management or organizational policies for the experienced difficulty or failure.

Hypothesis H1d states that creating value for the community (CVC) is significantly related to OCB-O. The results demonstrate that the relationship between the two variables is not significant. This finding is contrary to that reported by previous studies (Ehrhart, 2004; Hu, & Liden, 2011; Liden *et al*., 2008; Neubert *et al*., 2008; Vondey, 2010; Walumbwa, 2010). One plausible explanation might be that the surveyed employees do not recognize supervisors' behaviour of community development services as something important to the organization, or they might have perceived it to be another form of impression management. So, employees that participated in this survey study have chosen to be indifferent toward their supervisors' behaviour of creating value for the community. People will only be under social obligation to reciprocate good to whom they receive well (Blau, 1964). In the case of this study, leader's positive behaviors directed at developing the outside community may have failed to motivate employees to exhibit citizenship behaviour targeted at the organization (OCB-O) because the employees have not personally experienced any significant benefits from such behaviour. The participated individuals have not been able to clearly link benefits of the leader

behaviour to their persons, hence feeling of reluctance to exhibit OCB-O (Gouldner, 1960).

Hypothesis H1f states that conceptual skill (CS) is significantly related to OCB-O. As expected, the results for this study provided empirical support for the hypothesis. Employees exhibit OCB-O as a result of their satisfaction with the leader who quickly understand their complex work problems and then offer help to solve them. Therefore, the finding is consistent with social exchange theory (Blau, 1964), which states that when a person does a favour for another person, there is an expectation of some future favourable return. Thus, it is likely that OCB-O shown by the participants in the current study is an appreciation to the treatment and assistance they might have received from their supervisors. In fact, it is expected that the sample participants who were drawn from technically based organizations (i.e., electricity, telecommunication and water supply) would demonstrate OCB-O as a result of the conceptual skills of their supervisors. Similarly, the result is also consistent with social learning theory (Bandura, 1977), which states that whatever behaviors people exhibit are products of the environment. In the current study, participants might have demonstrated OCB-O as a result of supervisors' extra assistance regarding coaching, guidance and solving complex work problems for the subordinate employees. Therefore, because supervisors are perceived to expend extra efforts outside the formal job contract, employees learn similar behaviors by expending extra efforts to help the organization by putting extra effort to accomplish task objectives, attending meetings regularly and avoiding talks to the outsiders that can tarnish the image of the organization (OCB-O). The current

225

finding also supports past similar works (Ehrhart, 2004; Hu & Liden, 2011; Liden *et al*., 2008; Neubert *et al*., 2008; Walumbwa *et al*., 2011).

Hypothesis H1h states that helping subordinates grow and succeed (HSGS) is positively related to organizational citizenship behaviour benefiting the organization (OCB-O). Unexpectedly, the results demonstrate that the relationship is not significant. Employees did not choose to direct their citizenship behaviors toward the organization despite supervisors' behaviour of helping subordinates to grow and succeed. In other words, the findings demonstrate that helping subordinates grow and succeed does not affect employees' willingness to exhibit OCB-O. Like discussed previously under the OCB-I model relationships, the insignificant result may not be surprising if employees consider the positive leader behaviour of helping subordinates grow and succeed as mere impression management. This finding is inconsistent with previous studies regarding helping subordinates grow and succeed and OCB-O (Ehrhart, 2004; Hu & Liden, 2011; Liden *et al*., 2008; Neubert *et al*., 2008; Walumbwa *et al*., 2011).

Hypothesis H1j states that putting subordinates first (PSF) is positively related to OCB-O. As expected, the current finding provides empirical support for the hypothesis. The finding is similar to that of the previous studies (Ehrhart, 2004; Walumbwa *et al*., 2011). The result confirms the principles underlying the social exchange theory (Blau, 1964) that emphasizes exchange of benefits and norm of reciprocity. Employees reciprocate the management's policies and practices that consider their interests first before those of the organization. So, employees reciprocate by actions such as regular attendance of meetings, persevering with temporary difficulties and avoiding behaviors that can undermine the attainment of

organizational objectives. Similarly, the result also confirms the principles of social learning theory (Bandura, 1977). In the current study, participants might have learnt to demonstrate OCB-O by imitating their supervisors who go outside the formal call of their duties to prioritize work interests of their subordinates above all other interests.

### 5.3.3 Direct Effects: SLBs and Psychological Ownership

Five hypotheses were tested: (1) H2a, which states that there is a significant relationship between emotional healing (EH) and psychological ownership; (2) H2b, which states that there is a significant relationship between creating value for the community (CVC) and psychological ownership; (3) H2c, which states that there is a significant relationship between conceptual skills (CS) and psychological ownership; (4) H2d, which states that there is a significant relationship between helping subordinates grow and succeed (HSGS) and psychological ownership; and finally (5) H2e, which states that there is a significant relationship between putting subordinates first (PSF) and psychological ownership.

Out of the five hypotheses, H2c was found to be non-significant. Similarly, one hypothesis (H2b) showed significant, but negative relationship. While remaining three hypotheses (H2a, H2d, and H2e) were all positively significant and supported. Discussions on these results have been done on the basis of positive significant relationships and non-significant or negative relationships.

Hypothesis H2a states that there is a significant relationship between emotional healing and psychological ownership (PO). Expectedly, the results have provided empirical support for the hypothesis. The findings demonstrate strong

positive and significant support for the hypothesized relationship, indicating that when leaders help followers achieve psychological and spiritual recovery from failure, hardship or traumatic condition, the followers reciprocate by showing psychological ownership (PO) for the organization. Consistent with social exchange theory (Blau, 1964) that suggests reciprocal relationship, psychological ownership may be seen by followers as a better way to reciprocate the leader's good gesture of psychological support to alleviate sufferings of the followers. Similarly, the result also confirms the principles of social learning theory (Bandura, 1977) that emphasizes the importance of leadership influence on the work environment. Therefore, employees might have learnt to demonstrate psychological ownership by imitating their supervisors who go beyond the job description to counsel, comfort and restore normal emotional and psychological settings of employees just for the organization to progress.

Next significant finding is connected to the relationship stated in hypothesis H2d. Therefore, hypothesis H2d of this study states that there is a significant relationship between helping subordinates grow and succeed (HSGS) and psychological ownership (PO) for the organization. Similar to the previous findings, the results of this study have also provided strong empirical support for this hypothesis. The findings demonstrate positive significant effect of leader's behaviour for helping subordinates grow and succeed (HSGS) on employees' psychological ownership. This indicates that when leader engages in helping subordinates to grow and succeed; in return, the followers' increase the feelings of ownership for the organization. Interestingly, this scenario is consistent with social exchange theory (Blau, 1964) that reiterates the acts of reciprocity in social

relationships. Similarly, the result also confirms the principles of social learning theory (Bandura, 1977) that people in a particular social setting learn to behave in some ways by modelling others who interest them. Therefore, the psychological ownership experienced by participated employees in this study might be as a result of modelling the leaders' behaviour of helping subordinates grow and succeed.

Finally, hypothesis H2e of this study states that there is a significant relationship between putting subordinates first (PSF) and psychological ownership (PO) for the organization. The findings demonstrate strong positive significant effect of leader's behaviour for putting subordinates first (PSF) on employees' psychological ownership for the organization. This indicates that when leader prioritizes followers' interest in whatever actions he/she takes, in return the followers' feelings of ownership for the organization would increase. Therefore, the finding is in tandem with the social exchange theory (Blau, 1964) that emphasizes the existence of social exchanges among individuals interacting in a particular social setting. Similarly, the result also justifies the social learning theory's (Bandura, 1977) postulation that in the course of social interactions such as the one found in typical organizational setting, people learn to behave in some ways by modelling others who interest them. In the present study, therefore, the psychological ownership experienced by the sample participants might be as a result of the leaders' behaviour of putting subordinates first whenever decisions are to be made.

Importantly, all the current significant positive findings appear to be consistent with social exchange and social learning theories (Blau, 1964; Bandura, 1977). Organizational leaders are often seen as the symbol of the organizations

(Liden, Bauer, & Erdogan, 2004) and servant leaders are dedicated beyond the requirements of a typical employment contract at helping subordinates grow and succeed (Liden *et al*., 2008). In this study, the employees felt obliged to reciprocate the positive servant leader behaviors of emotional healing, helping subordinates grow and succeed and putting subordinates first by developing positive psychological state of ownership feelings for the organization.

Secondly, consistent with social learning theory (Bandura, 1977), research has shown that leadership behavior impacts on employee behavior through various ways and that servant leaders communicate to employees what is right or wrong and what is important in a work setting (Neubert *et al*., 2008). Again, the literature indicates that situational cues strongly invoke employees to seek out for information related to behavioral expectations and their potential consequences (James, James, & Ashe, 1990; Scott & Bruce, 1994). Psychological ownership is a conscious formation of feelings of ownership for the organization within an individual, suggesting that it can be invoked by situational cues. Accordingly, situational cues such as the emotional healing, creating value for the community, conceptual skills and putting subordinates first might have induced the development of psychological ownership among followers, as suggested by the social learning theory (Bandura, 1977).

As stated earlier, findings demonstrate negative significant effect of leader's community support on employees' psychological ownership. This indicates that when leader intensifies effort to help and develop the surrounding community, the followers' feelings of ownership for the organization decrease. The negative relationship might be consistent with the teachings of expectancy theory (Vroom,

1964). The theory states that a person's decision to perform a specific behavior is based upon the person's analysis of the valence (i.e., overall attractiveness) that he/she perceives to be associated with the outcomes of the person's behavior and the expectancy (i.e., subjective estimation of the probability) that the person's behavior will lead to the desired outcomes. In the case of this study, it might be that the respondents' view of creating value for the community by their organization diminishes or depletes the organizational resources, not adding value to them or the organization, hence, the refusal of respondents to become psychologically attached with the organization in terms of ownership feelings. It is well established, in the management literature, that an individual will be motivated into performance of a particular behavior only if he/she perceives positive relationship between his/her efforts and performance as well as between his/her performance and desired reward (Vroom, 964). Consistent with this, because respondents have not considered creating value for the community as a worthwhile reward for psychological ownership, the respondents just decide to be indifferent, thus refusing to show they have ownership feelings toward the organization (Gouldner, 1960).

Another plausible reason for the negative finding may be that the positive leader behaviour of creating value for the community is perceived as mere impression management. Thus, impression management suggests that the primary motive, both within and outside the organization, for a particular behavior, is to win support and avoid negative evaluation (Rosenfeld, Giacalone, & Riordan, 1995). It might be possible that the respondents perceived their leader's behaviour as a strategy to win support of the community and hence avoid negative evaluation. Employees may choose to frustrate the organization by reducing their level of

psychological ownership as the organization engages more in community development projects. The subordinates might want the organization to focus more resources and attention on them rather than the community.

The study also found no significant relationship between conceptual skills (CS) and psychological ownership. This finding indicates that when the leader demonstrates knowledge about organizational problems and helps subordinates solve their work problems; the subordinates' emotional state in terms of ownership feelings for the organization does not change. The result may not be surprising for two reasons: (1) psychological ownership may not be seen by followers as a better way to reciprocate the leader's good gesture because psychological ownership may not be tangibly expressed to the leader to understand; and (2) the subordinates may choose to reciprocate the positive leader behaviour with positive behaviour directed specifically at the person of leader. Reciprocating leader's good gesture with psychological ownership may not be seems to be compatible, as psychological ownership largely benefits the organization (Pierce *et al.* 2004). Therefore, employees might have chosen to look at the supervisor who benefits them with his/her vast knowledge as a separate entity from the organization he represents, thereby treating him more positively as an individual and behaving with indifference to the organization.

### 5.3.4   Direct Effects: Psychological Ownership, OCB-I and OCB-O

Psychological ownership (PO) is defined as a cognitive and emotive attachment between the individual and the object, which in turn influences the individual's self-perception and conduct (Ozler, Yilmaz, & Ozler, 2008). This section discusses the

results of the test of hypotheses H3a and H3b. Hypothesis H3a states that there is a significant relationship between PO and OCB-I, while H3b states that there is a significant relationship between PO and OCB-O.

As expected, both hypotheses receive empirical support, indicating that when followers experience psychological ownership for the organization, they become motivated to exhibit OCB-I and OCB-O. Feelings of ownership for the organization motivate one to focus on activities that are likely to help, develop and sustain the organization. Because feeling of possession creates a sense of responsibility that motivates behavior of the person experiencing it (Furby, 1978), the person is likely to perform relevant forms of behaviors including OCBs to ensure the sustainability and development of the organization (Van Dyne & Pierce, 2004). The current findings have found support from the previous studies (Chang *et al*., 2012; Vandewalle *et al*., 1995; Van Dyne & Pierce, 2004).

The reason why employees exhibit high level OCB-I than OCB-O might be because employees interact physically and to some extent develop bond with the co-workers and supervisors. Moreover, although an organization can be seen physically, it is just an entity that is not actually personified. More importantly, it is a common knowledge that people become more intimate with people they see and interact with. Additionally, research has shown that employees consider it very important to have a positive working relationship with fellow co-workers, even in situations where the employee does not have a strong personal relationship (Kahn, 2013). Hence, this indicates the tendency for employees to exhibit OCB-I in greater extent than OCB-O.

Having discussed the direct effects of servant leader behaviors on OCBs and PO, as well as the direct effects of PO on OCBs, next sections discuss the mediating effects. That is next sections would focus on discussing the role of PO on the relationships between the five servant leader behaviour constructs and the two OCB constructs (OCB-I and OCB-O).

### 5.3.5 Mediating Effects of Psychological Ownership

Ten hypotheses (H4a, H4b, H4c, H4d, H4e, H4f, H4g, H4h, H4i, and H4j) regarding mediating effects of psychological ownership on the relationships between the five servant leader behaviors and two OCB constructs were tested. Results demonstrated that six hypotheses (H4a, H4d, H4e, H4f, H4i and H4j) were found to be significant while the remaining four (H4b, H4c, H4g, and H4h) were not significant. The following discusses the results in detail.

### 5.3.5.1 Significant Mediation Effects

Six hypotheses (H4a, H4d, H4e, H4f, H4i and H4j) were found to be significant. Specifically, significant relationships were found between (1) emotional healing and OCB-I; (2) helping subordinates grow and succeed and OCB-I; (3) putting subordinates first and OCB-I; (4) emotional healing and OCB-O; (5) helping subordinates grow and succeed and OCB-O; and (6) putting subordinates first and OCB-O. Generally, in both OCB-I and OCB-O models, results from the PLS analysis demonstrate that the mediation effects of PO on the relationship between emotional healing, helping subordinates grow and succeed, and putting subordinates first were positively and strongly validated.

Because results regarding the mediating effects represent the major contributions for this study, the questions of why and how mediation of psychological ownership took place could only answered by theoretical explications rather than past studies. Therefore, important theories including social exchange (Blau, 1964) and social learning (Bandura, 1977) have provided theoretical bases for the new findings.

Firstly, the present mediation results are supported by social exchange theory (Blau, 1964) in the sense that when subordinates or followers feel that their leader is caring for their personal growth, career development, and success, they feel as if the organization the leader represents is just their own (psychological ownership) and, hence, feel obligated to demonstrate sign of ownership by exhibiting voluntary positive behaviors that could benefit co-workers, the leader, and the organization (OCBs). Consistent with social exchange theory (Blau, 1964), results indicate that positive servant leader behaviors (i.e., emotional healing, helping subordinates grow and succeed and putting subordinates first) strongly create obligation on followers to develop sense of ownership feelings (i.e., psychological ownership) for the organization, which ultimately motivate the followers to perform extra-role behaviors that are beneficial to employees within the organization (OCB-I), and the organization in general (OCB-O).

Secondly, social learning theory (Bandura, 1977) proposes that any social behavior people display is learned primarily by observing and imitating the actions of others, as well by being rewarded, or punished for these actions. Additionally, social learning theory states that models are an important source for learning new behaviors and for achieving behavioural change in organizational settings (Sims &

Manz, 1996). The present mediation result is supported by social learning theory in two ways: (1) servant leaders serve followers with strong commitment for their wellbeing, development and success (Greenfield, 1972). Because servant leader represents personification of the organization (Liden *et al*., 2008), the subordinates become motivated to adopt the leader as a role model to the extent that they learn to love and feel the organization they serve is their own; and (2) servant leader's knowledge about the organization's processes, structures and prospect are passed unto the followers; the more subordinates become knowledgeable about their organization, the more likely they develop psychological ownership for the organization and exhibit OCBs. Therefore, one way subordinates respond to the good leadership behaviors of servant leaders (i.e., emotional healing, helping subordinates grow and succeed and putting subordinates first) is to imitate the leader by developing strong sense of psychological ownership and consequently demonstrate OCB that benefits individuals (OCB-I) and the organization (OCB-O).

### 5.3.5.2 Not significant Mediation Effects

Four hypotheses (H4b, H4c, H4g, and H4h) were found to be not significant. Specifically, the not significant relationships were found between: (1) creating value for the community and OCB-I; (2) conceptual skills and OCB-I; (3) creating value for the community and OCB-O; and (4) conceptual skills and OCB-O. Elaborately, the results demonstrate that sampled respondents were indifferent to the role of emotional healing, helping subordinates grow and succeed, as well as, putting subordinates first as catalysts for eliciting psychological ownership and eventual performance of OCB-I and OCB-O. Some plausible explanations as to why these findings have been presented in the following sections.

First, hypothesis H4b states that psychological ownership will significantly mediate the relationship between creating value for the community and organizational citizenship behaviour benefiting the individual (OCB-I). Results have not supported the hypothesized relationship. Results demonstrate that leader's concern for community development does not stimulate psychological ownership among followers and, hence, inhibits citizenship behaviour benefiting the individual within the organization (OCB-I). This result is not surprising because an employee behaves positively only when he/she perceives a positive connection between his/her efforts and performance; or between performance and reward; or when he/she attaches high value to the perceived reward (Vroom, 1964). Therefore, in this study as indicated by findings, participants do not value the servant leader behaviour that emphasizes developing the community as such they failed to experience psychological ownership, hence restricted the participants from performing the OCB-I.

Second, hypothesis H4c states that psychological ownership will significantly mediate the relationship between conceptual skills and organizational citizenship behaviour benefiting the individual (OCB-I). Unfortunately, the results failed to support the hypothesized relationship. The results demonstrate that leader's knowledge of the work and the organization, as well as the ability to solve complex organizational problems does not stimulate psychological ownership among followers. Hence, it consequently inhibits employees to perform citizenship behaviour benefiting the individuals within the organization (OCB-I). This result is not surprising because conceptual skills demonstrated by the leader are not a motivating factor for employee psychological ownership, thus, constraining the

employees from exhibiting OCB-I. The failure of psychological ownership to mediate the relationship between conceptual skills and OCB-I is consistent with Vroom's (1964) idea that expected reward and attractiveness of the reward serve to influence behavioural performance of individuals.

Third, hypothesis H4g states that psychological ownership will significantly mediate the relationship between creating value for the community and organizational citizenship behaviour benefiting the organization (OCB-O). Unexpectedly, the finding has failed to support the hypothesis; the results demonstrated that leader's devotion at creating value for the community in which the organization operates does not stimulate psychological ownership among followers, which consequently inhibits citizenship behaviour benefiting the organization (OCB-O). The lack of mediating effect of psychological ownership on the relationship between creating value for the communityand OCB-O might be as a result of participants of this study are not motivated by activities of the management targeted at benefiting the community. It is long established that if people are to be motivated to behave in some way, they need to see a good reason to act in the desired direction (Locke, 1968). This indicates that the central issue in work motivation is to give employees what they want most from the work. Therefore, because creating value for the community is not perceived to be a good motivator for psychological ownership and eventual OCB-O, the followers acted with indifference toward the leader's behaviour of creating value for the community.

Fourth, hypothesis H4h states that psychological ownership will significantly mediate the relationship between conceptual skills and organizational citizenship behaviour benefiting the organization (OCB-O). Unfortunately, the

238

results have not supported the hypothesis, because the results demonstrate that leader's ability to understand organizational complex problems (i.e. conceptual skills) does not motivate both psychological ownership and OCB-O among participants of this study. Similar to the last section, because conceptual skills are not perceived to be a good motivator for psychological ownership and eventual OCB-O, the followers acted with indifference toward the leader's behaviour of conceptual skills. Thus, supporting the notion that if people are desired to behave in some way, they need to see a good reason to act in the desired direction (Locke, 1968). Because the central issue in work motivation is to give employees what they want most from the work. Therefore, the failure of psychological ownership to mediate the relationship between conceptual skills and OCB-O is consistent with Vroom's (1964) idea that expected reward and attractiveness of the reward serve to influence behavioural performance of individuals.

In sum, consistent with social exchange theory (Blau, 1964) and social learning theory (Bandura, 1977), the present study has found that most servant leader behaviors significantly influence OCB-I and OCB-O through psychological ownership. Specifically, psychological ownership was found to have a mediating effect on six of the ten hypothesized mediational relationships as follows: (1) emotional healing and OCB-I; (2) helping subordinates grow and succeed and OCB-I; (3) putting subordinates first and OCB-I; (4) emotional healing and OCB-O, (5) helping subordinates grow and succeed and OCB-O; and finally (6) putting subordinates first and OCB-O.

However, consistent with expectancy theory (Vroom, 1964) and equity theory (Locke, 1968), psychological ownership has failed to exhibit any mediating

effect on the remaining four of the ten hypothesized mediational relationships as follows: (1) creating value for the community and OCB-I; (2) conceptual skills and OCB-I; (3) creating value for the community and OCB-O; and finally; (4) conceptual skills and OCB-O.

### 5.3.6 Implications and Future Research Directions

The findings of the present study have several important implications for: (1) organizational management or practice; (2) theory development; and (3) methodology of research. The implications are, therefore, discussed one after the other in the following three different sections.

### 5.3.6.1 Managerial Implications

The current findings have contributed to management practice in three major ways including: (1) revealing the importance of servant leadership as a significant leadership style; (2) revealing the importance of psychological ownership as a significant psychological state; and finally (3) revealing the importance of psychological ownership as a significant mediating variable on servant leader behaviors and employee OCBs.

Firstly, the fact that the current study has provided empirical evidence that certain servant leader behaviours are positively related to psychological ownership) and OCBs, managers in the organizations can take a cue and develop the styles of servant leadership. It is, therefore, important for management to understand the influencing power of servant leadership style for employee positive outcomes such as OCB and positive psychological state such as psychological ownership. Against this background, management should prioritize, promote and encourage the culture

of servant leadership in their organizations. Management can prioritize servant leadership style through their human resource policies and practices. Specifically, managers can use leadership by example and training to teach top, middle and low level managers about the importance and techniques of servant leader behaviors.

Certainly, increased managers' awareness about the connection between techniques and behaviours of servant leaders and positive work outcomes (for e.g. OCB) can help to motivate servant leadership among supervisory employees. It is well established that if leaders show concern to followers, the followers are likely to learn more and engage more in citizenship behaviors that benefit the individuals within the organizations (Walumbwa, Cropanzano, & Hartnell, 2009). Furthermore, current findings indicate that leaders inspire followers to partake in serving the community in which the organization operates. When servant leadership is practised, the organization can develop the culture of serving others, both within and outside the organization.

Secondly, the current study has revealed the importance of psychological ownership as a significant psychological state that motivates employees to perform OCB-I and OCB-O. Thus, this finding presents yet another important clue for managers to grasp and utilize in motivating and enhancing performance of OCBs among their subordinates. Hence, managers should appreciate the impact of psychological ownership and, therefore, enhance its development and sustainability among all employees. This further implies that management should encourage development of feelings of ownership for the organization (i.e., psychological ownership) among all employees.

Thirdly, the current study has statistically revealed the importance of psychological ownership as a significant mediating factor for transferring the effects of emotional healing, creating value for the community, conceptual skills, helping subordinates grow and succeed, and putting subordinates first (servant leader behaviors) to employee OCB-I and OCB-O. Management attitudes and actions should be sensitive to creating a sense of ownership feeling among employees by showing genuine concern to employees. Servant leader inclusive behaviors such as listening to employees, showing care for personal growth and development of subordinates and generally genuine positive management actions toward employees must be encouraged.

As already stated in previous sections, practicing and development of these servant leadership behaviors could be achieved through the acts of reciprocity and social exchange (Blau, 1964), as well as through modelling or imitation (Bandura, 1977). Thus, for organizations to create and sustain positive employee outcomes especially psychological ownership and OCB, managers should accept and internalize the teachings of both the social exchange (Blau, 1964), as well as social learning theory (Bandura, 1977). This may be achieved by demonstrating good acts of a typical servant leader for effective stimulation of reciprocal actions from the employees (Blau, 1964) and motivating leadership modelling by the employees (Bandura, 1977).

### 5.3.6.2 Theoretical Implications

Using the individual constructs involved in this study, the current findings have contributed to literature and theory development in three major ways including: (1)

establishing the mediating effect of psychological ownership on the relationship between servant leader behaviors and OCB constructs; (2) establishing the positive effect of servant leader behaviors on psychological ownership; and (3) revalidating the significant relationship of servant leadership and OCB in unique context; and (4) extending the theories of social exchange (Blau, 1964) and social learning (Bandura, 1977).

Firstly, regarding mediational relationship between servant leader behaviors and OCB constructs, literature indicated that previous studies have demonstrated significant mediational relationships between servant leadership and OCBs (Ehrhart, 2004; Walumbwa *et al.* 2011). However, the current mediational study has theoretically provided a new knowledge about mediation by demonstrating that servant leader behaviors have positive effects on employee OCB through psychological ownership. Thus, this study has pushed the boundary of knowledge forward by providing empirical evidence about the power of psychological ownership to mediate significantly between servant leadership and OCBs. Therefore, the present study has done more than mere validating the positive effect of servant leadership on employee OCB as demonstrated in the previous findings (Ehrhart, 2004; Hu & Liden, 2011; Liden *et al.*, 2008; Neubert *et al.*, 2008; Vondey, 2010; Walumbwa *et al.* 2011).

Importantly, the mediating role of psychological ownership on the relationship between servant leader behaviors and OCBs (i.e. OCB-I and OCB-O) has provided a new perspective regarding the way that leadership behaviors can pass through to positively affect individual behavior in the organization (i.e. OCB-I and OCB-O). The present study demonstrates that through development of

psychological ownership, servant leaders can motivate performance of employee OCB for effective functioning of the organization (Organ, *et al.*, 1988). In sum, the present study has uniquely provided a mediating mechanism for better understanding of relationship dynamics existing between servant leadership and employee OCB. Related to the proven mediational power of psychological ownership, this study has reinforced the arguments made by Mayhew *et al.* (2007) and Reb and Connolly (2007) regarding the potential important role of psychological ownership as a mediator.

Secondly, the current study represents an additional contribution to theory and literature of servant leadership and psychological ownership. Specifically, the study has, for the first time, established a positive directional relationship between servant leadership (emotional healing, helping subordinates grow and succeed, and putting subordinates first) and psychological ownership.

Thirdly, the current study represents an additional contribution to the existing servant leadership-OCB literature. The servant leadership-OCB study is still considered to be new considering the period the studies began and the number of the studies found in the literature. Literature revealed that although servant leadership appears to be an old concept that has been in the literature for more than four decades (Greenleaf, 1970), it started to appear in OCB literature only in less than one decade ago (Ehrhart, 2004). In addition, extensive review of literature revealed only a few servant leadership-OCB studies (Ebener & O'Connell, 2010; Ehrhart, 2004; Hu & Liden, 2011; Liden *et al.*, 2008; Neubert *et al.*, 2008; Vondey, 2010; Walumbwa *et al.* 2011). Therefore, much more about the theoretical

relationships between servant leadership and OCB remained unexplained especially in countries such as Nigeria where no similar study was conducted.

Consequent to the preceding claim, with exception of Walumbwa *et al*. (2011), the rest of servant leadership-OCB studies were conducted in the developed economies of the West and U.S.A. The context of the current study (i.e. Nigeria) is a multi-ethnic, multi linguistic, multi religious and the most populated in the African continent, thus literature regarding the servant leadership-OCB is bound to be enriched. The current study is undoubtedly a good contribution to the literature since it revealed relationship between servant leadership and OCB in a Nigeria's context, which hitherto related literature has not reported. Consequently, the current study has provided additional demographic bases for comparative studies and additional validation regarding the significant relationship between servant leadership and OCB.

Fourthly, the findings of this study have extended the social exchange theory (Blau, 1964) and social learning theory (Bandura, 1977). Social exchange theory (Blau, 1964) suggests that in order for relationships to strive, parties in the relationships must have the feeling of mutual benefits from each other. Using the social exchange theory, therefore, this study has been able to establish that certain servant leader behaviors create in employees feelings of ownership of the organization that subsequently lead them to perform two forms of OCB (i.e., OCB-I and OCB-O). The study confirms the servant leader behaviors include the following: (1) genuine leadership care and concern for employees in times of difficulty, or unpleasant experience – emotional healing; (2) concern for the development of the community – creating value for the community; (2) concern for

245

employees' learning and solving job related problem for career success – conceptual skills; (4) concern for employees' personal growth, development and success – helping subordinates grow and succeed; as well as (5) considering the employees' interest first before anything else – putting subordinates first.

More technically, the positive and significant relationships among servant leader behaviors, psychological ownership and organizational citizenship behaviors (OCB-I and OCB-O) are consistent with social exchange theory. When a leader offers positive supportive service, an implied commitment for future reciprocation on the followers' side is activated. The followers then act in discretionary ways that benefit individuals and the organization (OCB-I and OCB-O). Such reciprocation forms the basis for more genuine concern for welfare and personal development of the followers from the leader. Hence, continuous supportive exchanges between the leader and followers are created. The findings of this study have, therefore, validated and extended social exchange theory (1964) by portraying employee OCB through the mechanics of servant leadership and psychological ownership. Theoretically, this validation is significant because it has extolled the relevance of social exchange theory (1964) by explaining a contemporary leader-employee exchange relationships. More specifically, the findings shows that enhanced fair social exchange relations, as originally described in the social exchange theory, between servant leader and his/her followers create the feeling of psychological ownership among the workers, which ultimately influences employee OCB.

Furthermore, the findings of this study have also extended social learning theory (Bandura, 1977). Social learning theory suggests that human learning occurs mostly in a social context by observing others (Bandura, 1977). In addition,

individuals observe models and the consequences of modelled behaviors in order to learn about the usefulness and appropriateness of behaviors, and then act in accordance with their beliefs concerning the expected outcomes of their actions. Using the social learning theory, this study has been able to establish that servant leaders who exhibit behaviors, particularly emotional healing, and creating value for the community, conceptual skills, helping subordinates grow and succeed, and putting subordinates first are attractive for modelling by most of the followers. As a result of the modelling, the followers experience psychological ownership and consequently become motivated to perform organizational citizenship behaviors that both benefit individuals and the organization (OCB-I and OCB-O). The findings for the current study have, therefore, validated the social learning theory (Bandura, 1977) by portraying that servant leaders are modelled by followers leading to performance of OCB through the mechanism of psychological ownership.

### 5.3.6.3 Methodological Implications

Previous servant leadership-OCB studies have employed the use of analytical tools including the SPSS and SEM AMOS to produce results (Ehrhart, 2004; Vondey, 2010; Walumbwa *et al*. 2011). This study has explored a relatively new tool of analysis (i.e., PLS) to explain the structural relationship the constructs of this study. The PLS tool is a general model that comprises principal components techniques, canonical correlation, multiple regression, multivariate analysis of variance among others. Hence, the present study's use of this relatively new tool of analysis has some important methodological implications.

Firstly, the use of PLS tool provides an opportunity for testing the robustness and predictive power of the tool in a study that explores integrative relationships of servant leadership and OCBs. Secondly, by using servant leadership-OCB model in this study, the PLS tool provides a new framework for comparisons of results obtained from previous studies that used different tools of analysis. Thirdly, another methodological contribution of this study relates to the validation of the Williams and Anderson's (1991) OCB measurement scale adopted in this study. This study has answered the call for full application of Liden et al.'s (2008) measurement in understanding the influence of servant leadership (Vondey, 2010). Thus, the current study represents a unique methodological contribution to servant leadership-OCB literature. The adopted scale was subjected to reliability and validity tests. Results of convergent and discriminant validity showed acceptable results that go beyond the minimum thresholds.

Finally, PLS principal component analysis was used to refine and fit the data for this study, thus providing new knowledge about the effects of PLS PCA on servant leadership, psychological ownership and OCB constructs. After PLS confirmatory factor analysis (CFA), the multi-dimensionality of servant leadership (Liden *et al*., 2008) and two OCB dimensions (Williams & Anderson, 1991) were retained. Similarly, the unidimensionality of psychological ownership construct (Van Dyne & Pierce, 2004) was also retained after the PLS CFA. Although the multidimensionality of servant leadership construct was retained, only five dimensions emerged against the adopted seven by Liden *et al*. (2008). The PLS confirmatory and validation processes for the three measurements for this study represent methodological contributions to the literature of servant leadership,

psychological ownership and OCB by providing additional validation about the constructs in a new methodological perspective.

### 5.3.7 Limitations and Future Research Directions

Despite the revealed insightful findings, this study has some limitations. These limitations include use of self-reporting method, common-method bias, lack of good sampling frame, use of cross-sectional survey,

Firstly, this study only employed the self-reporting method to collect the needed data on the mediating role of psychological ownership on the relationship between servant leadership and OCBs. Although this method is consistent with previous OCB studies (e.g., (Ehrhart, 2004; Vondey, 2010; Walumbwa *et al.* 2011), some researchers are sceptical of the reliability of the measure because of possible rater's bias. Despite the fear of bias, employee rating still remains the most effective and reliable mechanism to assess employee OCB. Ehrhart (2004), who employed both employee and supervisor ratings of OCB, concluded that employee rating appears to be the most significant. Furthermore, the alleged source bias regarding employee OCB becomes irrelevant considering the consistent significant results of the previous studies (Ehrhart, 2004). Similarly, employee rating has been portrayed to be superior source of data in comparison to supervisor rating. In a separate study, it has been reported that managers only observe OCB that is performed in their presence or that is directed toward them, and they do not distinguish genuine OCB from ingratiation (Eastman, 1994).

Secondly, because servant leader behaviors, psychological ownership and OCB ratings were supplied by the employees, suggest the possibility of common-

method bias. However, in order to guard against the problem in this study some measures were taken at the data collection stage to mitigate the expected problem. Podsakoff *et al*. (2003) suggest that in order to mitigate common-method bias, data for analysis of variables under study should be collected at different times. Thus, though questions regarding servant leadership, psychological ownership and OCB were combined in a single questionnaire, questions regarding each construct were provided separately and participants were told to do their ratings/answer the questions at three different times. This design and some others ensure that common method bias is not completely responsible for the current findings. Thus, methodological rating strength of the present study should not be doubted. However, future research should combine both self-reporting and supervisor rating.

Thirdly, this study used stratified random sampling without a sampling frame. Lack of sampling frame is considered one of the major methodological limitations encountered in this research. This study was conducted among the lower and middle level employees of Nigeria's public utility organizations. Given that these organizations do not officially allow lists of their employees to outsiders for reason of confidentiality, it poses a constraint on the current study's sampling technique. However, the lack of a sampling frame is a common challenge in management research that involves employees as the unit of analysis. Against this background, Babbie (2004) suggests that social research requires the selection of a sample from the population that is not easily listed, necessitating the creation and executing an appropriate sampling strategy. This study attempted to overcome the constraint of lack of sampling frame by trying to randomize the sampling selection as much as possible. To avoid the challenge of unavailability of a sampling frame,

future research should consider different organizations with less stringent need to protect confidentiality. Future studies may consider public universities or institutions of higher learning as they may be more liberal and cooperative in releasing the list of their employees.

Fourthly, cross-sectional survey was adopted for this study in which data was collected within the period of only three months. The problem of using the cross-sectional survey is that the studied variables (i.e., servant leadership behaviors, psychological ownership and OCBs) might change over time. A change in management policy, leadership style or economic situation could have an impact on the research variables. Because this study is not longitudinal, it has a specified expected period of completion of three years; a longer period for data collection is not feasible. In view of this procedural short coming, future research may use a longitudinal study to explore the interactions between servant leader behaviors, psychological ownership and OCBs. Specifically, future research may use experimental or qualitative interview designs to assess causality. Schwab (2005) argues that researchers should be using longitudinal data to examine causal relationships to reduce the common method variance (CMV) bias.

Fifthly, this study only focused on the employees of Nigeria's public utility organizations (PHCN, NITEL and KSWB) in Kano State, indicating limited scope of the study. Although this study did not aim at comparing the employees of Nigeria's public utility organizations (PHCN, NITEL and KSWB) at different regions, differences may be found. Given the fact that workers of the three utility organizations are homogenous and available resources are limited, focusing on one geographical region (North-west) became more appropriate and economical.

251

Because of the differences in geographical locations and the possible variance, it is recommended that future research should consider covering all the remaining five geo-political regions (north-east, north-central, south-west, south-east and south-south) and comparisons of various responses be made.

Fifthly, the model presented in this study is too small in scope to examine all factors that might influence employee performance of citizenship behaviors in Nigeria's utility organizations. The low variances of 4.8% for OCB-I and 2.7% for OCB-O explained by servant leader behaviour models through the mediating variable of psychological ownership are statistical indications that the model might not be strong (Cohen, 1988). Hence, it follows that the variance explained may improve by including more variables into the present model. However, despite the R-square of 2.7% and 4.8% are considered low, results of this study are considered to be statistically significant and acceptable (Cohen, 1988).  The study has theoretically demonstrated the predictive validity of its model. However, future research may come in to investigate other variables that may improve the variance explained by the present model. In addition, future studies should consider various conditions under which servant leadership is more or less effective.

Against this background, suggestions for mediating and moderating the servant leadership behaviors and OCB relationships have been provided. For example, future study can investigate the possible use of job satisfaction as a mediating variable between servant leadership and OCB. This is because servant leadership focuses on identifying and meeting the needs of all employees. Therefore, employees are likely to experience job satisfaction that can lead to OCB. Similarly, this study suggests future study to investigate the possible use of

personality factors such as conscientiousness, emotional stability, openness to experience and extraversion as moderating variables on the relationship between servant leadership behaviors and OCB. Because servant leaders spend great deal of time at encouraging and inculcating characteristics that may be useful to followers, employee personality characteristics can facilitate or increase performance of OCB.

Additionally, individual values could be considered. Individual values indicate what constitutes normative behaviors as well as acceptable roles for the individual within specific social contexts (Triandis, 1995). Individual values have been shown to largely influence individual's evaluation of other people's behaviors (Nahum-Shani & Somech, 2011). Thus, individual values can well serve as moderator in a model involving servant leader behaviors, psychological ownership, and OCB. Specifically, individual values can be tested as a moderator on the relationship between servant leadership and psychological ownership, as well as on the relationship between servant leadership and OCB.

Like the way some employees do not want their job to be challenging and responsibility laden (Hackman & Oldham, 1976), similarly, some employees do not desire to work with servant leaders who try to know employees closely so as to help, develop and guide them for career and organizational success (Liden *et al* 2008). Indeed, from the informal conversations with participants in the current study, it is discovered that some employees who are corrupt minded view servant leadership as "restraining" in their way of thinking and approach of discharging organizational responsibilities. Therefore, future research may investigate the extent to which people's mindset on leaders within a given culture can moderate effectiveness of servant leadership behaviors in influencing employee OCB.

253

The current study has examined the mediating effects of psychological ownership for the organization on the relationship between servant leader behaviors and two forms of OCB (OCB-I and OCB-O). The results demonstrated differential variances explained through the psychological ownership mechanism. The results indicated OCB-I as showing higher variance explained of 4.8%, while OCB-O shows lower variance explained of 2.7 percent. This indicates that employees/subordinates are motivated to perform more OCB-I than OCB-O when working with leaders who employ servant leader behaviors and motivate development of psychological ownership. Future research should, therefore, investigate factors responsible for the differential effects of servant leader behaviors on OCB-I and OCB-O through psychological ownership. Future research should explore, for example, the moderating role of social relations on the integrative role of psychological ownership in the current study.

### 5.3.8   Conclusion

Theoretically, two important gaps exist in the literature concerning the relationship between servant leadership and OCBs. Previous studies on this area (Ehrhart, 2004; Vondey, 2010; Walumbwa *et al*. 2011) have not addressed the following in their study: (1) the mediating influence of psychological ownership on the relationship between servant leadership and OCBs; and (2) the relationship between servant leadership and psychological ownership. The present study has contributed to the body of knowledge by providing empirical evidence about the mediating power of psychological ownership on the relationship between servant leadership and OCBs. The study has also provided empirical evidence of the significant relationship between servant leadership and psychological ownership. Apart from the major

contributions, at a secondary level, this study has enriched the literature by further validating previous findings (Ehrhart, 2004; Vondey, 2010; Walumbwa *et al*. 2011) regarding the significant positive relationship between servant leader behaviors and two OCB constructs including OCB-I and OCB-O. Importantly, using a newer context (Nigeria) and setting (public utility sector), this study demonstrated that servant leader behaviors significantly and positively influence citizenship behaviors that benefit both individuals and organization (OCB-I and OCB-O).

Greenleaf (1977) argues that if leaders serve followers, in return, the followers will be inspired to serve others. In addition, Organ *et al*. (2006) propose that followers who see their leaders help subordinates develop, who provide personal support to followers, and who exhibit genuine interest in their followers will themselves be inspired and motivated to reciprocate and to give to others. Importantly, findings of this research have indicated association between servant leadership and OCB, servant leadership and psychological ownership, as well as between psychological ownership and OCB. Against this backgrounds, this study will practically be relevant to the ailing Nigerian public utility organizations, specifically PHCN Plc, NITEL Limited and KSWB. Results of this study indicate that embracing, inculcating and practicing of servant leader behaviours, psychological ownership and OCB by these ailing or rather ineffective utility sector organizations can help to revive and enhance the effective functioning of the organizations.

# REFERENCES

Aabed, A. (2006). *A* study of Islamic leadership theory and practice. A published doctoral dissertation AAT 3206991, K-12 Islamic School Michigan*,* Brigham Young University.

Adamolekun, L., & Ayeni, V. (1990). Sub-Saharan African" in Subramaniam, V. (Ed), *Public Administration in the Third World.* Greenwood Press Inc: Connecticut.

Adams, J. S. (1965). Inequity in Social Exchange. In L. Berkowitz (ed): *Advances in Experimental Social Psychology Vol. 2.* New York: Academic Press.

Ahmadi, F. (2010). Relationship between OCB and internal and external factors impact on OCB. *European Journal of Social Sciences*, 16, 3, 460-478.

Akter, S., D'Ambra, J., & Ray, P. (2011). An evaluation of PLS based complex models: The roles of power analysis, predictive relevance and GoF index. *Proceedings of the Seventeenth Americas Conference on Information Systems, Detroit, Michigan August 4th-7th*.

Albers, S., 2010. PLS and success factor studies in marketing, In: Esposito Vinzi, V., Chin, W.W., Henseler, J., Wang, H. (Eds.), *Handbook of Partial Least Squares: Concepts, Methods and Applications* (Springer Handbooks of Computational Statistics Series, vol. II). Springer, Heidelberg, Dordrecht, London, New York, pp. 409-425.

Ali, I., Ali, J. F., & Raza, S. H. (2011). Determinants of public sector employee's performance in Pakistan. *Far East Journal of Psychology and Business,* 5, 2, 23-29.

Ali, Z., Mehmud, S. T., Baloch, Q. B., & Usman, M. (2010). Impact of organizational justice on organizational citizenship behavior of bankers of NWFP, Pakistan: An empirical evidence. *Interdisciplinary Journal of Contemporary Research in Business*, 2, 7, 111-117.

Allen, T., & Rush, M. (2001). The influence of rate gender on ratings of organizational citizenship behavior. *Journal of Applied Social Psychology*, 31, 12, 2561-2587.

Allison B. J., Voss R. S., & Dryer, D. (2001). Student classroom and career success: The role of organizational citizenship behavior. *Journal of Educational Business*, 76, 5, 282-289.

Al-sharafi, H., & Rajiani, I. (2013). Promoting organizational citizenship behavior among employees - the role of leadership practices. *International Journal of Business and Management*, 8, 6, 47-54.

Altman, I. (1975). *The environment and social behavior.* Monterey, Calif.: Brooks/Cole.

Ambali, A., Suleiman, G. E., Bakar, A. N., Hashim, R., & Tariq, Z. (2011). Servant leadership's values and staff's commitment: Policy implementation focus. *American Journal of Scientific Research,* 13, 18-40.

Andrews, D. W. K. & Buchinsky, M. (2002). On the number of bootstrap repetitions for BCa confidence intervals. *Econometric Theory,* 18, 4, 962-84.

Ariani, D. W. (2010). Social capital moderating roles towards relationship of motives, personality and organizational citizenship behavior: Cases in Indonesian banking industry. *The South East Asian Journal of Management*, 4, 2, 161-183.

Ariyo, A., & Jerome, A. (2004). *Utility privatization and the poor: Nigeria in focus.* Global Issue Papers No. 12. Heinrich Böll Foundation: Berlin.

Asgari, A., Silong, A. D., Ahmad, A., & Sama, B. A. (2008). The relationship between transformational leadership behaviors, leader-member exchange and organizational citizenship behaviors. *European Journal of Social Sciences*, 6, 4, 140-151.

Avey, J. B., Avolio, B. C., Crossley, C. D., & Luthans, F. J. (2009). Psychological ownership: Theoretical extensions, measurement and relation to work outcomes. *Journal of Organizational Behavior*, 30, 173–191.

Avolio B. J., & Gardner, W. L. (2005). Authentic leadership development: Getting to the root of positive forms of leadership. *The Leadership Quarterly,*16, 315–38.

Avolio, B. J., Zhu, W., Koh, W. & Bhatia, P. (2004). Transformational leadership and organizational commitment: mediating role of psychological empowerment and moderating role of structural distance. *Journal of Organizational Behavior,* 25, 951-968.

Avolio, B. J., Gardner, W. L., & Walumbwa, F. O. (2007). Authentic leadership questionnaire. Mind Garden, Inc. Measure Authentic Leadership. *www.mindgarden.com/products/alqconsult.htm*

Avolio,B. J., & Gardner, W. L. (2005). Authentic leadership development: getting to the root of positive forms of leadership. *The Leadership Quarterly,* 16, 3, 315–338.

Babbie, E. R. (1973). *Survey research methods.* Belmont, CA: Wadsworth.

Babbie, E. (2004) *The Practice of Social Research*, 10 ed. The US: Wadsworth, Thomson Learning, Inc.

Babcock-Roberson, M. E., & Strickland, O. J. (2010). The relationship between charismatic leadership, work engagement, and organizational citizenship behaviors. *Journal of Psychology*, 144, 3, 313–326.

Baker, B. A. (2005). The good, the bad and the ugly: The mediating role of attributional style in the relationship between personality and performance. North Carolina State University.

Balliet, D., & Ferris, D. L. (2013). Ostracism and prosocial behavior: A social dilemma perspective. *Organizational Behavior and Human Decision Processes*, 120, 298–308.

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review,* 84, 2, 191-215.

Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice Hall.

Barbuto, J., & Wheeler, D. (2006). Scale development and construct clarification of servant leadership. *Group & Organization Management*, 31, 300−326.

Barclay, D., Higgins, C., & Thompson, R. (1995). The partial least squares (PLS) approach to causal modelling. *Technology Studies*, 2, 285-323.

Barker, R. A., (2002). *On the nature of leadership.* Lanham: University Press of America.

Barnard, C. I. (1938). *The functions of the executive*. Cambridge, MA: Harvard University Press.

Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51, 6, 1173-1182.

Barnard, C. I. (1938). *The functions of the executive*. Harvard University Press, Cambridge, Massachusetts, (30th anniversary edition 1974).

Bass, B. M. (1985). *Leadership and performance beyond expectations.* New York: Free Press.

Bass, B. M. (1990). *Bass and Stogdill's handbook of leadership: Theory, research, and managerial applications* (3rd ed.). New York: Free Press.

Bass, B. M. (2000). The future of leadership in learning organizations. *Journal of Leadership Studies, 7*(3), 18-38.

Bass, B. M., & Steidlmeier, P. (1999). Ethics, character, and authentic transformational leadership behavior. *Leadership Quarterly,* 10, 2, 181-217.

Bass, B. M., & Avolio, B. J. (1994). *Improving organizational effectiveness through transformational leadership.* Newbury Park, CA: Sage Publications.

Bass, B. M., & Steidlmeier, P. (1999). Ethics, character, and authentic transformational leadership behavior. *The Leadership Quarterly, 10*(2), 181-216.

Bateman, T. S., & Organ, D. W. (1983). Job satisfaction and the good soldier: The relationship between affect and employee 'citizenship. *Academy of Management Journal*, 26, 587-95.

Beaglehole, E. (1932). *Property: A study in social psychology*. New York: Macmillan.

Beekun R. I., & Badawi, J. (1999). *Leadership: An Islamic Perspective*. Beltsville, Maryland.

Beggan, J. K. (1991). Using what you own to get what you need: The role of possessions in satisfying control motivation. *Journal of Social Behavior and Personality,* 6, 6, 129-146.

Beggan, J. K., & Brown, E. M. (1994). Association as a psychological justification for ownership. *Journal of Psychology,* 128, 4, 365-380.

Bell, S. J., & Menguc, B. (2002). The employee-organization relationship, organizationalcitizenship behaviors, and superior service quality. *Journal of Retailing*, 78, 131–146.

Belk, R. W. (1988). Possessions and the extended self. *Journal of Consumer Research*, 15, 139–168.

Bekker, C. J. (2006). *The Philippians hymn (2:5-11) as an early mimetic Christological model of Christian leadership in Roman Philippi*. Servant Leadership Research Roundtable, Virginia Beach (VA), USA.

Berg, N. (2002). Non-response bias. www.utdallas.edu/~nberg/Berg.../BergNon-ResponseBiasMay2002.pdf.

Bartlett, J. E., Kotrlik, J. W., & Higgins, C. (2001). Organizational Research: Determining Appropriate Sample Size in Survey Research. *Information Technology, Learning, and Performance Journal,* 19, 1, 43-50.

Bettencourt, L. A. (2004). Change-oriented organizational citizenship behaviors: The direct and moderating influence of goal orientation. *Journal of Retailing*, 80, 165–180.

Bharathidasan, S. S., & Jawahar, P. D. (2013). Job satisfaction as a predictor of organizational citizenship behavior: An empirical study. *Global Journal of Business Research,* 7, 1, 71-80.

Biemer, P.P., & Lyberg, L. (2003). *Introduction to Survey Quality.* John Wiley

Bienstock, C. C., DeMoranville, C. W., & Smith, R. K. (2003). Organizational citizenship behavior and service quality. *Journal of Services Marketing*, 17, 4, 357-378.

Bing, M. N., Davison, H. K., Minor, I., Novicevic, M. M., & Frink, D. D. (2011). The prediction of task and contextual performance by political skill: A meta-analysis and moderator test. *Journal of Vocational Behavior*, doi:10.1016/j.jvb.2011.02.006.

Blake, R. R., & Mouton, J., S. (1966). The managerial grid & the pursuit of excellence. *The Management Review*, 6(6), 20-23.

Blau, P. (1964). *Exchange and power in social life*. New York: Wiley & Sons.

Boerner, S., Eisenbeiss, S. A., & Griesser, D. (2007). Follower behavior and organizational performance: the impact of transformational leaders. *Journal of Leadership & Organizational Studies,* 13(3), 15-26.

Bollen, K. A. (1989). *Structural equation modeling with latent variables* (2nd ed.). New York: Wiley.

Bollen, K., Lennox, R. (1991). Conventional wisdom on measurement: A structural equation perspective. *Psychological Bulletin,* 110, 2, 305-314.

Bollen, K. A., & Stine, R. (1990). Direct and indirect effects: Classical and bootstrap estimates of variability. *Sociological Methodology,* 20, 115–140.

Bommer, W. H., Miles, E. W., & Grover, S. I. (2003). Does one good turn deserve another? Coworker influences on employee citizenship. *Journal of Organizational Behavior, 24,* 181–196. DOI: 10.1002/job.187.

Bontis, N., Booker, L. D., & Serenko, A. (2007). The mediating effect of organizational reputation on customer loyalty and service recommendation in the banking industry. *Management Decision,* 45, 9, 1426-1445.

Borman, W. C., & Motowidlo, S. J. (1993). Expanding the criterion domain to include elements of contextual performance. In N. Schmitt, & W. C. Borman (Eds.), *Personnel selection in organizations* (pp. 71-98). San Francisco: Jossey-Bass.

Borman, W., & Motowildo, S. (1997). Task performance and contextual performance: The meaning for personnel selection research. *Human Performance*, 10, 2, 99-109.

Brief, A. P., & Motowidlo, S. J. (1986). Prosocial organizational behavior. *Academy of Management Review*, 11, 4, 710-725.

Bowler, W. M., Halbeleben, J. R. B., Stodnick, M., Seevers, M. T., & Little, L. M. (2009). The moderating effect of communication network centrality on motive to perform interpersonal citizenship. *Journal of Managerial Issues,* 21(1), 80-96.

Brockner, J., & Higgins, E. T. (2001). Regulatory focus theory: Implications for the study of emotions at work. *Organizational Behavior and Human Decision Processes*, 86, 1, 35–66.

Brown, R. L. (1997). Assessing specific mediational effects in complex theoretical models. *Structural Equation M odeling,* 4, 142-156.

Brown, M. E., Treviño, L. K., & Harrison, D. A. (2005). Ethical leadership: A social learning perspective for construct development and testing. *Organizational Behavior and Human Decision Processes,* 97, 117–134.

Brown, T. L. (1989, June 19). What will it take to win? Industry Week, 1989, 15.

Burk, C. (1900). The collecting instinct. *Pedagogical Seminary,* 7, 179-207.

Burns, J. M. (1978). *Leadership*. New York: Harper & Row.

Burton, J. P., Sablynski, C. J., & Sekiguchi, T. (2008). Linking justice, performance and citizenship via leader–member exchange. *Journal of Business Psychology*, 23, 51–61.

Caspi, A., & Blau, I. (2011). Collaboration and psychological ownership: How does the tension between the two influence perceived learning? *Social Psychology of Education*, 14, 283–298. Doi: 10.1007/s11218-010-9141-z.

Cavana, R. Y., Delahaye, B. L., & Sekaran, U. (2001). *Applied business research: Qualitative and quantitative method.* Australia: John Wiley & Sons.

Chattopadhyay, P. (1999). Beyond direct and symmetrical effects: The influence of demographic dissimilarity on OCB. *Academy of Management*, 42, 3, 273-287.

Chang, A., Chiang, H., & Han, T. (2012). A multilevel investigation of relationships among brand-centered HRM, brand psychological ownership, brand citizenship behaviors, and customer satisfaction. *European Journal of Marketing,* 46, 5, 626-662. DOI 10.1108/03090561211212458.

Chemers, M. M. (1995). Contemporary leadership theory. In J. T. Wren (Eds.), *The Leader's Companion: Insights on Leadership Through the Ages* (pp. 83-99). New York: The Free Press.

Chen, C., & Chiu, S. (2009). The mediating role of job involvement in the relationship between job characteristics and organizational citizenship behavior. *Journal of Social Psychology*, 149, 4, 474–494.

Chen, L., Niu, H., Wang, Y., Yang, C., & Tsaur, S. (2009). Does job standardization increase OCB? *Journal of Public Personnel Management*, 38, 3, 39-49.

Chen, Z., Eisenberger, R., Johnson, K. M., Sucharski, I. L. & Aselage, J. (2009). Perceived organizational support and extra-role performance: Which leads to which? The *Journal of Social Psychology*, 149, 1, 119-124.

Cherrington, D. J. (1994). Organizational behavior: *The management of of individual and organizational performance* (2nd ed.). USA: Allyn and Bacon.

Chi, N. & Han, T. (2008). Exploring the linkages between formal ownership and psychological ownership for the organization: The mediating role of organizational justice. *Journal of Occupational and Organizational Psychology*, 81, 691–711.

Chiaburu, D. S., & Baker, V. L. (2006). Extra-role behaviors challenging the status quo: Validity and antecedents of taking charge behaviors. *Journal of Managerial Psychology*, 21, 620-637.

Chiang, C., & Hsieh, T. (2012). The impacts of perceived organizational support and psychological empowerment on job performance: The mediating effects of organizational citizenship behavior. *International Journal of Hospitality Management,* 31, 180–190.

Chiboiwa, M. W., Chipunza, C. & Samuel, M. O. (2011). Evaluation of job satisfaction and organizational citizenship behavior: Case study of selected organizations in Zimbabwe. *African Journal of Business Management,* 5, 7, 2910-2918.

Chin, W.W. (1998a). Issues and opinion on structural equation modeling. MIS Quarterly, 22, 1, VII-XVI.

Chin, W. W. (1998b). The partial least squares approach for structural equation modeling. In George A. Marcoulides (Ed.), *Modern Methods for Business Research*, Lawrence Erlbaum Associates, Lawrence Erlbaum Associates, Mahwah, NJ, 295-336.

Chin, W. W. (2010). How to write up and report PLS analyses. In Esposito, V., *et al.* (eds.), *Handbook of Partial Least Squares* (pp. 655 − 688). New York: Springer-Verlag.

Chou, S. Y., & Pearson, J. (2011). A Demographic study of information technology professionals' organizational citizenship behavior. *Journal of Management Research*, 3, 2, 1-15.

Chou, S. Y., & Pearson, J. M. (2012). Organizational citizenship behaviour in IT professionals: An expectancy theory approach. *Career Development International,* 17, 3, 188-207. DOI 10.1108/13620431211241054.

Chow, W. S., & Chan, L. S. (2008). Social network and shared goals in organizational knowledge sharing. *Information Management*, 45, 7, 24–30.

Chughtai, A. A. (2008). Impact of job involvement on in-role job performance and organizational citizenship behaviour. *Institute of Behavioral and Applied Management*, 169-183.

Chung, Y. W., & Moon, H. K. (2011). The moderating effects of collectivistic orientation on psychological ownership and constructive deviant behavior. *International Journal of Business and Management,* 6, 12, 65-77.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.

Cohen, A., & Kol, Y. (2004). Professionalism and organizational citizenship behavior : An empirical examination among Israeli nurses. *Journal of Managerial Psychology,* 19, 4, 386-406.

Cohen, A., & Vigoda, E. (2000). Do good citizens make good organizational citizens? An empirical examination of the relationship between general citizenship and organizational citizenship behavior in Israel. Administration & Society, 32, 5, 596-624.

Cohen, L. & Manion, L. (1980). *Research methods in education*. London: Groom Helm Ltd.

Comeau, D. J., & Griffith, R. L. (2005). Structural interdependence, personality and organizational citizenship behavior: An examination of person-environment interaction. *Personnel Review,* 34, 3, 310-30.

Cone, J. D. (2001). *Evaluating outcomes: Empirical tools for effective practice.* Washington, DC: American Psychological Association.

Conger, J. A., & Kanungo, R. N. (1987). Toward a behavioral theory of charismatic leadership in organizational settings. *Academy of Management Review, 12*, 4, 637-647.

Conger, J. A., Kanungo, R. N., & Menon, S. T. (2000). Charismatic leadership and follower effects. *Journal of Organizational Behavior, 21,* 7, 747-767.

Conger, J. A., & Kanungo, R. N. (1998), *Charismatic Leadership in Organizations*. Thousand Oaks, CA: Sage Publications.

Coleman, V. I., & Borman, W. C. (2000). Investigating the underlying structure of the citizenship performance domain. *Human Resource Management Review*, 10, 25–44.

Collins, J. (2001). *Good to Great: Why Some Companies Make the Leap and Others Don't*. New York: HarperCollins.

Couchman, P. K., & Fulop, L. (2006). Building trust in cross-sector R&D collaborations: Exploring the role of credible commitments. A paper submitted for Sub-theme 11 "Trust within and across boundaries: conceptual challenges and empirical insights" of the 22nd EGOS Colloquium (Bergen, Norway, 6 − 8 July 2006).http://www98.griffith.edu.au/dspace/bitstream/andle/10072/15583/egos2006 f.pdf? sequence=1

Coyle-Shapiro, J. A. M. (2002). A psychological contract perspective on organizational citizenship behavior. *Journal of Organizational Behavior*, 23, 8, 927-946.

Creswell, J. W. (1994). *Research design: qualitative & quantitative approaches.* London: SAGE Publications.

Creswell, J. W. (2003). *Research design* (2nd ed.). Thousand Oaks, CA: Sage.

Crittenden, P. M. (2005). Theory, psychopathology and psychotherapy: The approach dynamic maturation. *Psychotherapy,* 30, 171-182.

Cronbach, L. J., (1951). Coefficient alpha and the internal consistency of tests. *Psychometrica*, 16, 297-334.

Csikszentmihalyi, M., & Rochberg-Halton, E. (1981). *The meaning of things: Domestic symbols and the self.* Cambridge: Cambridge University Press.

Cummings, G. G., McGregor, T., Davey, M., Lee, H., Wong, C. A., Lo, E., *et al.* (2010). Leadership styles and outcome patterns for the nursing workforce and work environment: A systematic review. *International Journal of Nursing Studies*, 47, 3, 363-385.

Daft, R. (2008). *New Era of Management*, 2nd edn. Thomson South-Western: China

Daft, R. L. (2005). *The Leadership Experience,* 3rd ed. Thomson-Southwestern: Vancouver.

Dalal, R. S. (2005). A Meta-analysis of the relationship between organizational citizenship behavior and counterproductive work behavior. *Journal of Applied Psychology*, 90, 6, 1241–1255.

Dansereau, F., Cashman, J., & Graen, G. (1973). Instrumentality theory and equity theory as complementary approaches in predicting the relations of leadership and turnover among managers. *Organizational Behavior & Human Performance, 10,* 184-200.

Darling, F. F. (1937). *A herd of red deer.* London: Oxford University Press.

Das, G. (1993). Local memoirs of a global manager. *Harvard Business Review*, 71, 2, 38-47.

Dávila, M. C. & Finkelstein, M. A. (2010). Predicting organizational citizenship behavior from the functional analysis and role identity perspectives: Further evidence in Spanish employees. *The Spanish Journal of Psychology*, 13, 1, 277-283.

Davis, T. R. V., & Luthans, F. (1980). A social learning approach to organizational behavior. *The Academy of Management Review,* 5, 2, 281-290.

Delbecq, A. L. (1999). Christian spirituality and contemporary business leadership. *Journal of Organizational Management,* 12, 345-349.

Deluga, R. J. (1998). Leader–member exchange quality and effectiveness *situational and contextual predictors of citizenship behavior in Mexico.* Paper presented at the annual meetings of the Academy of Management, Vancouver, British Columbia, Canada.

Dennis, R. S. & Bocarnea, M. (2005). Development of a servant leadership assessment instrument. *The Leadership & Organization Development Journal,* 26, 8, 600-615.

Dennis, R., & Winston, B. E. (2003). A factor analysis of Page and Wong's servant leadership instrument. *Leadership & Organization Development Journal, 24*(8), 455-459.

De Pree, M. (1989). *Leadership is an Art*. New York: Dell Publishing.

DeRue, D. S., Nahrgang, J. D., Wellman, N., & Humphrey, S. E. (2011). Trait and behavioral theories of leadership: A meta-analytic test of their relative validity. *Personnel Psychology,* 64, 7-52.

Devonish, D. & Greenidge, D. (2010). The effect of organizational justice on contextual performance, counterproductive work behaviors, and task performance: Investigating the moderating role of ability-based emotional intelligence. *International Journal of Selection and Assessment*, 18, 1, 76-86.

Dienesch, R. D. & Liden, R. C. (1986). Leader-member exchange model of leadership: A critique and further development. *Academy of Management Review*, 11, 618-34.

Dierendonck, D., & Nuijten, I. (2011). The servant leadership survey: development and validation of a multidimensional measure. *Journal of Business Psychology,* 26, 249–267. DOI 10.1007/s10869-010-9194-1.

Dillman, D. A. (2000). *Mail and internet surveys: the tailored design method.* Brisbane: Wiley.

Dimitriades, Z. S. (2007). The influence of service climate and job involvement on customer-oriented organizational citizenship behavior in Greek service organizations: a survey. *Employee Relations*, 29, 5, 469-491.

DiPaola, M. F., & Mendes da Costa Neves, P. M. (2009). Organizational citizenship behaviors in American and Portuguese public schools measuring the construct across cultures. *Journal of Educational Administration*, 47, 4, 490-507.

Dipboye, R. L. (1977). A critical review of Korman's self consistency theory of work motivation and occupational choice. *Organizational Behavior and Human Performance*, 18, 108-126.

Dirks, K. T., Cummings, L. L., & Pierce, J. L. (1996). Psychological ownership in organizations: Conditions underwhich individuals promote and resist change. In R.

W. Woodman & W. A. Pasmore (Eds.), *Research in organizational change and development* (Vol. 9 pp. 1–23). Greenwhich, CT: JAI Press.

Dittmar, H. (1992). *The social psychology of material possessions: To have is to be*. New York: St. Martin's Press.

Dixon, J. C., & Street, J. W. (1957). The distinction between self and not-self in children and adolescents. *Journal of Genetic Psychology,* 127, 157-162.

Dogarawa, L. M. (2011). A new model for performance measurement in the Nigerian public service. *International Journal of Business and Management,* 6, 12, 212-221.

Doug, A., Burton, N., Cuthill, I., Festing, M., & Hutton, J. Playle, L. (2006). Why do a pilot study? *www.je-lks.org/index.php/full-volumes/english-version-2005?task.*

Druskat, V. U. & Kubzansky, P. E. (1995). *Measuring the psychological sense of ownership in the workplace*. Paper presented at the annual meeting of the Academy of Management, Vancouver, British Columbia.

Durkheim, E. (1957). *Professional ethics and civil morals.* (C. Brookfield, Trans.). London: Routledge and Kegan Paul.

Dutton, J. E., Dukerich, J. M., & Harquail, C. V. (1994). Organizational images and member identification. *Administrative Science Quarterly,* 39, 239-263.

Dvir, T., Kass, N., & Shamir, B. (2004). The emotional bond: Vision and organizational commitment among high-tech employees. *Journal of Organizational ChangeManagement,* 17, 2, 126-143.

Dyne, L.V., Graham, J. W., & Dienesch, R. M. (1994). Construct redefinition, measurement and validation. *Academy of Management Journal*, 37, 4, 765-802.

Eastman, K. K. (1994). In the eye of the beholder: An attributional approach to ingratiation and organizational citizenship behavior. *Academy of Management Journal,* 37, 5, 1379-1391.

Ebener, D. R. & O'Connell, D. J. (2010). How might servant leadership work?, nonprofit. Management & Leadership, 20, 3, 315–335. Doi.org/10.1002/nml.256.

Echu, E. S. (2008). Motivation in public sector: The Nigerian experience . *The Nigerian Journal of Management Research.* [Online] Available: www.dspace.unijos.edu.ng/ bitstream/1048

Efron, B., & Tibshirani, R. J. (1993). *An introduction to the bootstrap*. Boca Raton, FL: Chapman & Hall.

Ehigie, B. O., & Otukoya, O. W. (2005). Antecedents of organizational citizenship behavior in a government-owned enterprise in Nigeria. *European Journal of Work and Organizational Psychology*, 14, 4, 389-399.

Ehrhart, M. G. (2004). Leadership and procedural justice climate as antecedents of unit-level organizational citizenship behavior. *Personnel Psychology*, 57, 61-94.

Ehrhart, M. G., & Naumann, S. E. (2004). Organizational citizenship behavior in work groups: A group norms approach. *Journal of Applied Psychology, 89*, 6, 960-974.

Elsegeiny, S. K. (2005). American Muslim school leadership: Principal and teacher perspectives. A published doctoral dissertation, University of New Orleans.

Emmerik, I. J. H., & Jawahar, I. M. (2005). Lending a helping hand provision of helping behaviors beyond professional career responsibilities. *Career Development International*, 10, 5, 347-358.

Eisenberger, R., Huntington, R., Hutchison, S., & Sowa, D. (1986). Perceived organizational support. *Journal of Applied Psychology,* 71, 500–507.

Ellwood, C. A. (1927). *Cultural evolution: A study of social origins and development.* New York: Century.

Erturk, A. (2007). Increasing organizational citizenship behaviors of Turkish academicians: Mediating role of trust in supervisor on the relationship between organizational justice and citizenship behaviors. *Journal of Managerial Psychology*, 22, 3, 257-270.

Esu, B. B., & Inyang, B. J. (2009). A case for performance management in the public sector in Nigeria. *International Journal of Business and Management,* 4, 4, 98-105.

Etzioni, A. (1991). The socio-economics of property. In F. W. Rudmin (Ed.). *To have possessions: A handbook on ownership and property. Special Issue, Journal of Social Behavior and Personality*, 6, 6, 465–468.

Evans, M. G. (1996). R. J. House's "A path-goal theory of leader effectiveness. *The Leadership Quarterly,* 7(3), 305-309.

Farh, J., Podsakoff, P. M. & Organ, D. W. (1990). Accounting for organizational citizenship behavior: Leader fairness and task scope versus satisfaction. *Journal of Management*, 16, 4, 705-721.

Farling, M. L., Stone, A. G., & Winston, B. E. (1999). Servant Leadership: Setting the Stage for Empirical Research. *The Journal of Leadership Studies, 6*, 1, 50-67.

Farrell, S. K., & Finkelstein, L. M. (2007). Organizational citizenship behavior and gender: Expectations and attributions for performance. *North American Journal of Psychology*, 9, 1, 81-96.

274

Faul, F., Erdfelder, E., Lang, A.-G., & Buchner, A. (2007). G*Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods, 39*, 175-191.

Field, R. G., & Andrews, P. (1998). Testing the incremental validity of the Vroom-Jago versus Vroom-Yetton models of participation in decision making. *Journal of Behavioral Decision Making,* 11, 251-261.

Feldstein, M. (2006). A muckraking model investigative reporting cycles in American history. *Press/Politics,* 11(2), 1-16. DOI: 10.1177/1081180X06286780.

Fiedler, F. E., & Chemers, M. M. (1984). *Improving leadership effectiveness: The leader match concept*, 2nd edition. New York: John Wiley & Sons.

Fiedler, F. E. (1967). *A Theory of leadership effectiveness*, New York: McGraw-Hill.

Fiedler, F. E. (1971). *Leadership*, New York: General Learning Press.

Fiol, C. M., Harris, D., & House, R. (1999). Charismatic leadership: Strategies for 116 effecting social change. *Leadership Quarterly*, 10, 3, 449-482.

Fleishman, E. A. (1973). Twenty years of consideration and structure. In E. A. Fleishman & J. G. Hunt (Eds.), *Current developments in the study of leadership* (pp. 1–40). Carbondale, IL: Southern Illinois University Press.

Foote, D. A., & Tang, T. L. (2008). Job satisfaction and organizational citizenship behavior (OCB): Does team commitment make a difference in self-directed teams? *Management Decision*, 46, 6, 933-947.

Formanek, R. (1991). Why they collect: collectors reveal their motivations. *Journal of Social Behavior and Personality*, 6, 275–86.

Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable and measurement error. *Journal of Marketing Research,* 18, 39- 50.

Fornell, C., & Bookstein, F. L. (1982). Two structural equations models: LISREL and PLS applied to consumer exit-voice theory. *Journal of Marketing Research,* 19, 4, 440-452.

Freeman, G. T. (2011) Spirituality and servant leadership: A conceptual model and research proposal. *Emerging Leadership Journeys*, 4, 1, 120-140.

Furby, L. (1978). Possession in humans: An exploratory study of its meaning and motivation. *Social Behavior & Personality*, 6, 1, 49-65.

Gardner, W. L., Cogliser, C. C., Davis, K. M., & Dickens, M. P. (2011). Authentic leadership: A review of the literature and research agenda. *The Leadership Quarterly,* 22, 1120–1145.

Garg, P. & Rastogi, R. (2006). Climate profile and OCBs of teachers in public and private schools of India. *International Journal of Educational Management*, 20, 7, 529-541.

Geller, E. S. (2009). A spirit of servant leadership. *Industrial Safety & Hygiene News*, 43, 3, 20.

George B. (2003). *Authentic leadership: Rediscovering the secrets to creating lasting value*. San Francisco, CA: Jossey Bass.

George, J. M., & Brief, A. P. (1992). Feeling good-doing good: A conceptual analysis of the mood at work-organizational spontaneity relationship. *Psychological Bulletin*, 112, 310–329.

George, B., Sims, P., McLean, A. N., & Mayer, D. (2007). Discovering your authentic leadership. *Harvard Business Review,* 8, 2, 129-138.

George, B., Sims, P., McLean, A. N., Mayer, D. (2007). Discovering your authentic leadership. *Harvard Business Review,* 85, (2), 129–138.

Gerstner, C. R., & Day, D. V. (1997). Meta-analytic review of leader-member exchange theory: Correlates and construct issues. *Journal of Applied Psychology*, *82,* 827-844.

Good, P. (2000). *Permutation Tests: A practical guide to resampling methods for testing hypotheses.* New York: Springer-Verlag.

Gómez, C., & Rosen, B. (2001). The leader-member exchange as a link between managerial trust

and employee empowerment. *Group & Organization Management, 26*(1), 53.

Gouldner, A. W. (1960). The norm of reciprocity: a preliminary statement. *American Sociological Review*, 25, 161-77.

Graen, G. B. & Scandura, T. A. (1987). Toward a psychology of dyadic organizing. *Researchin Organizational Behavior*, 9, 175-208.

Graham, J. W. (1991a). An essay on organizational citizenship behavior. *Employee Rights and Responsibilities*, 4, 4, 249-270.

Graham, J. W. (1991b). Servant leadership in organizations: Inspirational and moral. *Leadership Quarterly*, 2, 105–119. Doi:10.1016/1048-9843(91)90025-W.

Graham, J. W (1995). Leadership, moral development and citizenship behavior. *Business Ethics Quarterly*, 5, 1, 43-54.

Graham, J. W. (1989). Organizational citizenship behavior: Construct redefinition, operationalization, and validation. Unpublished working paper, Loyola University of Chicago, Chicago, IL.

Greenberg, J., & Baron, R. A. (1997). *Behavior in organizations: Understanding and managing the human side of work* (7th ed.). New Jersey: Prentice Hall International, Inc.

Greenleaf R. K. (1970). *The Servant as Leader*, Indianapolis, IN: Greenleaf Center.

Greenleaf, R. K. (1972). *The institution as servant*, Indianapolis, IN: Greenleaf Center for Servant Leadership.

Greenleaf, R.K. (1977). *Servant leadership: A journey into legitimate power and greatness.* New York: Paulist Press.

Greenleaf, R. K. (1978). *The Leadership Crisis: A Message for College and University Faculty.* Indianapolis, IN: The Robert K. Greenleaf Center.

Griffin, R. J. E., & Ricky, W. (2010). *Business essentials* (8th ed. ed.). Upper Saddle River, NJ: Prentice Hall. pp. 135–136. ISBN 0-13-705349-5.

Gruys, M. L., & Sackett, P. R. (2003). Investigating the dimensionality of counterproductive work behavior. *International Journal of Selection and Assessment*, 11, 30–41.

Güçel, C. & Begeç, S. (2012). The effect of the servant leadership on organizational citizenship behavior: case study of a university. *International Journal of Social Sciences and Humanity Studies,* 4, 1, 107-116. .

Guillaume, O., Honeycutt, A., & Savage-Austin, A. R. (2013). The impact of servant leadership on job satisfaction. *Journal of Business and Economics,* 4, 5, 444-448.

Gustafsson, A., & Johnson, M. D. (2004). Determining attribute importance in a service satisfaction model. *Journal of Service Research,* 7, 2, 124-41.

Haas, D. F., & Deseran, F. A. (1981). Trust and symbolic exchange. *Social Psychology Quarterly,* 44, 1, 3-13.

Hackler, J. C., & Bourgette, P. (1973). Dollars, dissonance and survey returns. *Public Opinion Quarterly,* 37, 276-281.

Hackman, J. R., & Oldham G. R. (1976). Motivation through design of work. *Organisational Behavior and Human Performance*, 16, 250–79.

Hackman, J. R., & Oldham, G. R. (1980). *Work redesign.* Reading, MA: Addison-Wesley.

Hair, J. F. Jr., Anderson, R. E., Tatham, R. L. & Black, W. C. (1998). *Multivariate Data Analysis*, 5 ed. US: Prentice-Hall PTR.

Hair, J. F. Jr., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2006). *Multivariate Data Analysis* (6th ed). US: Prentice-Hall PTR.

Hair, J. F. Jr., Money, A. H., Samouel, P., & Page, M. (2007). *Research Methods for Business*. UK: John Wiley & Son Ltd.

Hair, J. F., Jr., Black, W. C., Babin, B. J., Andersen, R. E., & Tatham, R. L. (2010). *Mutilvariate data analysis* (7th ed.). Upper Saddle River, NJ: Pearson Prentice Hall.

Hair, J. F., Ringle, C. M., & Sarstedt, M. (2013). Partial least squares structural equation modeling: Rigorous applications, better results and higher acceptance. *Long Range Planning,* 46, 1-12.

Hale, J. R., & Fields, D. (2007). Exploring servant leadership across cultures: A study of followers in Ghana and the USA. *The Leadership,* 3, 4, 397-417.

Hall, K., R. (2010). Being or doing: An axiometric evaluation of servant leadership values and the informing-rendering agency of competence. A doctorate degree of education dissertation submitted to the School of Education Oakland City University.

Han, Y., Kakabadse, N. K. & Kakabadse, A. (2010). Servant leadership in the People's Republic of China: a case study of the public sector. *Journal of Management Development*, 29, 3, 265-281.

Haworth, C. L., & Levy, P. L. (2001). The importance of instrumentality beliefs in the prediction of organizational citizenship behaviors. *Journal of Vocational Behavior* 59, 64–75.

Hayes, A. F. (2009). Beyond Baron and Kenny: Statistical mediating analysis in the new millennium. *Communication Monographs*, 76, 4, 408-420.

Hayes, A. F., & Preacher, K. J. (2010). Quantifying and testing indirect effects in simple mediation models when the constituent paths are nonlinear. *Multivariate Behavioral Research,* 45, 4, 627-660. DOI: 10.1080/00273171.2010.498290.

Haykal, M. H., & Al-Faruqi, I. R. (1976). The life of Muḥ ammad. books.google.com.my/books?id=987XAAAAMAAJ.

Heider, F. (1958). *The psychology of interpersonal relations*. New York: John Wiley & Sons.

Heinrich, C. J. (2002). Outcomes-based performance management in the public sector: Implications for government accountability and effectiveness. *Public Administration Review,* 62, 6, 712-25.

Hersey, P., & Blanchard, K.H. (1982). *Management of organization behavior: Utilizing human resources.* Englewood Cliffs, NJ: Prentice-Hall.

Hesse, H. (1956). *Journey to the East.* Trans. Hilda Rosner. N.Y: Noonday/Farrar, Straus & Giroux.

Hou, S., Hsu, M., & Wu, S. (2009). Psychological ownership and franchise growth: An empirical study of a Taiwanese taxi franchise. *International Journal of Entrepreneurial Behavior & Research*, 15, 5, 415-435. Doi: 10.1108/13552550910983004.

House, R. J. (1996). Path-goal theory of leadership: Lessons, legacy, and a reformulated theory. *The Leadership Quarterly*, 7, 323–352.

House, Robert J. (1971). A path-goal theory of leader effectiveness. *Administrative Science Quarterly* 16, 3, 321–339. Doi:10.2307/2391905.

House, R. J., & Aditya, R. N. (1997). The social scientific study of leadership: Quo vadis? *Journal of Management*, 23, 3, 409-473.

House, R. J., Spangler, W. D., & Woycke, J. (1991). Personality and charisma in the U.S. presidency: A psychological theory of leadership effectiveness. *Administrative Science Quarterly,* 36, 364-396.

Howell, J. M., & Avolio, B. J. (1993). Transformational leadership, transactional leadership, locus of control and support for innovation: Key predictors of consolidated-business-unit performance. *Journal of Applied Psychology,* 78, 891-902.

Hu, J., & Liden, R. C. (2011). Antecedents of team potency and team effectiveness: An examination of goal and process clarity and servant leadership. *Journal of Applied Psychology*, 1-12. doi: 10.1037/a0022465.

Huang, M., & Liu, T. (2011). The impact of external environment and self-serving motivation on physician's organizational citizenship behaviors. *Journal of Behavioral Studies in Business,* 2, 1-10.

Hulland, J. (1999). Use of partial least squares (PLS) in strategic management research: A review of four recent studies. *Strategic Management Journal*, 20, 195-204.

Hulley, S. B. (2007). *Designing clinical research*. Lippincott Williams & Wilkins, p. 168-169. *www.2shared.com/document/.*

Hunter , E. M., Neuberta, M. J., Perry, S. J., Witt, L. A., Penney, L. M., & Weinberger, E. (2013). Servant leaders inspire servant followers: Antecedents and outcomes for employees and the organization. *The Leadership Quarterly*, 24, 316–331.

Hutchinson, J. C. (2009). Servanthood: Jesus' countercultural call to Christian leaders. *Bibliotheca Sacra,* 166, 53-69.

Ikävalko,  M., Pihkala T. & Kraus, S. (2010). The role of owner-managers' psychological ownership in SME strategic behavior. *Journal of Small Business and Entrepreneurship*, 23, 3, 461-480.

Ikel, (2005). Servant leadership in higher education: Exploring perceptions of educators and staff employed in a university setting. In Indartono, S., Chiou, H., & Chen, C. V. (2010). The joint moderating impact of personal job fit and servant leadership on the relationship between the task characteristics of job design and performance. *Interdisciplinary Journal of Contemporary Research in Business*, 2, 8, 42-61.

Iacobucci, D., Saldanha, N., & Deng, X. (2007). Meditation on mediation: Evidence that structural equations models perform better than regressions a meditation on mediation. *Journal of Consumer Psychology,* 17, 2, 140–154.

Ilies R., Morgeson F. P., & Nahrgang J. D. (2005). Authentic leadership and eudaemonic well-being: Understanding leader–follower outcomes. *The Leadership Quarterly*, 16, 373–94.

Ilies, R., Nahrgang, J. D. & Morgeson, F. P. (2007). Leader–member exchange and citizenship behaviors: A meta-analysis. *Journal of Applied Psychology*, 92, 1, 269-277.

Inkeles, A. (1969). Participant citizenship in six developing countries. *American Political Science Review,* 63, 4, 1120-1141.

Isaacs, S. (1933). *Social development in young children.* London: Routledge & Kegan Paul.

Islamic Scholar Software (1996). *Sahih Bukhari*, South Africa: Johannesburg: Par Excellence Computers.

James, W. (1890). *The principles of psychology*. New York: Henry Holt

James, L. R., James, L. A., & Ashe, D. K. (1990). The meaning of organizations: the role of cognition and values. In B. Schneider (Ed.), *Organizational climate and culture* (pp. 40-84). San Fransisco: Jossey-Bass.

Jawahar, I. M. & Dean, C. (2007). The compensatory effects of perceived organizational support and leader-member exchange. *Journal of Managerial Psychology,* 22, 330-349.

Jerome, A. (1999). Infrastructure in Africa: The Record African Development Bank. Economic Research Papers (International); No. 46:1-28.

Jones, E. E., & Pittman, T. S. (1982). Toward a general theory of strategic self-presentation. In J. Sulz (Ed.), *Psychological perspective on the self* (pp.231-253). Hillsdale, NJ: Lawrence Erlbaum Associates.

Johns, H. E., & Moser, H. R. (2001). From trait to transformation: The evolution of leadership theories. *Education*, 110, 115-122.

Joseph, E. & Winston, B. (2005). A Correlation of servant leadership, leader trust, and organizational trust. *Leadership & Organizational Development Journal*, 26, 1, 6-22.

Jung, D. I. (2001). Transformational and transactional leadership and their effects on creativity in groups. *Creativity Research Journal,* 13, 2, 185-195.

Jung, D. I., & Avolio, B. J. (2000). Opening the black box: An experimental investigation of the mediating effects of trust and value congruence on transformational and transactional leadership. *Journal of Organizational Behavior,* 21, 8, 949-964.

Jung, H. S., & Yoon, H. H. (2012). The effects of emotional intelligence on counterproductive work behaviors and organizational citizen behaviors among food and beverage employees in a deluxe hotel. *International Journal of Hospitality Management,* 31, 369– 378.

Kahn, L. B. (2013). Asymmetric information between employers. *American Economic Journal,* forthcoming. http://www.forbes.com/sites/jacquelynsmith /2013/02/06/ how -to-get-your-co-workers-to-like-you-better/.

Kandlousi, N. A., Ali, A. J., & Abdollahi, A. (2010). Organizational citizenship behavior in concern of communication satisfaction: the role of the formal and informal communication. *International Journal of Business and Management,* 5, 10, 51-61.

Kane, R. E., Magnusen, M. J., & Perrewe´, P. L. (2012). Differential effects of identification on extra-role behavior. *Career Development International,* 17, 1, 25-42.

Kappagoda, U. W. M. R. S., & Kulathunga, S. D. K. (2013). The impact of five factor model of personality on organizational citizenship behavior of non-managerial employees in the banking sector In Sri Lanka. Electronic copy available at: http://ssrn.com/abstract=2223077.

Kark, R., & Van Dijk, D. (2007). Motivation to lead, motivation to follow: The role of the self regulatory focus in leadership processes. *Academy of Management Review*, 32, 2, 500–528.

Katz, D. (1964). Motivational basis of organizational behavior. *Behavioral Science*, 9, 131-146.

Katz, D., & Kahn, R. L. (1966). *The social psychology of organizations*. New York: Wiley

Kark, R., & Van Dijk, D. (2007). Motivation to lead, motivation to follow: The role of the self regulatory focus in leadership processes. *Academy of Management Review*, 32, 500-528.

Kaufman, J. D., Stamper, C. L., & Tesluk, P. E. (2001). Do supportive organizations make for good corporate citizens? *Journal of Managerial Issues*, 13, 4, 436-449.

Khalid, S. A, & Ali, H. (2005). The effects of organizational citizenship behavior on withdrawal behavior: A Malaysian study. *International Journal of Management and Entrepreneurship*, 1, 1, 30 - 40

Khan, S. K., & Rashid, M. Z. A. (2012). The mediating effect of organizational commitment in the organizational culture, leadership and organizational justice relationship with organizational citizenship behavior: a study of academicians in private higher learning institutions in Malaysia. *International Journal of Business and Social Science,* 3, 8, 83-91.

Khan, M. A., Afzal, H., & Zia (2010). Correlation between antecedents of organizational citizenship behavior and organizations performance in contemporary Pakistani organizations. *Interdisciplinary Journal of Contemporary Research in Business*, 1, 11, 178-190.

Kidder, D. L. (2002). The influence of gender on the performance of organizational citizenship behaviors. *Journal of Management, 28,* 629–648.

Kim, S. (2006). Public service motivation and organizational citizenship behavior in Korea. *International Journal of Manpower*, 27, 8, 722-740.

Kim, S., O'Neill, J. W., & Cho, H. (2010). When does an employee not help coworkers? The effect of leader–member exchange on employee envy and organizational citizenship behavior. *International Journal of HospitalityManagement*, 29, 3, 530–537.

King, E. B., George, J. M., & Hebl, M. R. (2005). Linking personality to helping behaviors at work: an interactional perspective. *Journal of Personality*, 73, 3, 586-207.

Kirkpatrick, S. A., & Locke, E. A. (1991). Leadership: Do traits matter? *Academy of Management Executive*, 5, 2, 48-60.

Kline, L., & France, C. J. (1899). The psychology of mine. Pedagogical Seminary & Genetic Psychology, 6, 4, 421-470.

Konovsky, M. A., & Organ, D. W. (1996). Dispositional and contextual determinants of organizational citizenship behavior. *Journal of Organizational Behavior,* 17, *3*, 253-266.

Koster, F. & Sanders, K. (2006). Organizational citizens or cooperative relationships? A social dilemma approach to solidarity behavior of employees. *Personnel Review*, 35, 519-537.

Kostova, T. (1996). Success of the transnational transfer of organizational practices within MNEs. In Avey, J. B., Avolio, B. J., Craig D. Crossley, C. D. & Luthans, F. (2009). Psychological ownership: theoretical extensions, measurement and relation to work outcomes. *Journal of Organizational Behavior*, 30, 173–191.

Kostova, T. (1998). Quality of inter-unit relationships in MNEs as a source of competitive advantage. In M. Hitt, J. Ricart & R. Nixon (Eds.), *New managerial*

*mindsets: Organizational transformation and strategy implementation:* 299-324. Chichester, UK: Wiley.

Kreiner, R., & Kinicki, A. (2008). *Organizational behavior* (8th ed.). New York: McGraw-Hill Irwin.

Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, 30, 607-610.

Kubzansky, P. E., & Druskat, V. U. (1993). *Psychological sense of ownership in the workplace: Conceptualization and measurement*. Paper presented at the annual meeting of the American Psychological Association, Toronto, Ontario, Canada.

Kumar, R. (1999). *Research methodology: A step-by-step guide for beginners.* Thousand Oaks, CA: Sage.

Laub, J. (2003). From paternalism to the servant organization: Expanding the organizational leadership assessment (OLA) model. Retrieved February 24, 2008, fromhttp://www.regent.edu/acad/global/publications/slproceedings/2003/laubfrom paternalism. pdf

Laub, J. (2004). *Defining servant leadership: A recommended typology for servant leadership.* Paper presented at the 2004 Meeting of the Servant Leadership Roundtable, Virginia Beach, VA.

Lawler, E. E., III & Hall, D. T. (1970). Relationship of job characteristics to job involvement, satisfaction, and intrinsic motivation. *Journal of Applied Psychology*, 54, 305–312.

LePine, J., Erez, A., & Johnson, D. (2002). The nature and dimensionality of organizational citizenship behavior: A critical review and meta-analysis. *Journal of Applied Psychology*, 87, 1, 52-65.

Lerner, J. S., & P. E. Tetlock. (1999). Accounting for the Effects of Accountability. *Psychological Bulletin*, 125, 255-275.

Lewis, M., & Brook, J. (1974). Self, other, and fear: Infants' reactions to people. In M. Lewis & L. S. Rossenblum (Eds.), *The origins of fear*. New York: Wiley.

Lian, L. K., & Low Guan Tui, L. G. (2012). Leadership styles and organizational citizenship behavior: the mediating effect of subordinates' competence and downward influence tactics. *Journal of Applied Business and Economics,* 13, 2, 59-96.

Liang, Y. (2012). The relationships among work values, burnout, and organizational citizenship behaviors A study from hotel front-line service employees in Taiwan. *International Journal of Contemporary Hospitality Management,* 24, 2, 251-268. DOI 10.1108/09596111211206169.

Liden, R. C. & Maslyn, J. M. (1998). Multidimensionality of leader-member exchange: An empirical assessment through scale development. *Journal of Management*, 24, 43-73.

Liden, R. C., Wayne, S. J., Zhao, H., & Henderson, D. (2008). Servant leadership: Development of a multidimensional measure and multi-level assessment. *Leadership Quarterly*, 19,161–177.

Liden, R. C., Bauer, T. N., & Erdogan, B. (2004). The role of leader-member exchange in the dynamic relationship between employer and employee: Implications for

employee socialization, leaders, and organizations. In Coyle-Shapiro, Jacqueline. A-M. (ed.), *The employment relationship.* Oxford: University Press.

Lievens, F., & Anseel, F. (2004). Confirmatory factor analysis and invariance of an organizational citizenship behavior measure across samples in a Dutch-speaking context. *Journal of Occupational and Organizational Psychology*,77, 299–306.

Likert, R. (1979). *New patterns of management.* 2. ed. Translation Albertino Pinheiro and Ernesto D'Orsi. St. Paul: Pioneer.

Lin, C., Hung, W., & Chiu, C. (2008). Being good citizens: Understanding a mediating mechanism of organizational commitment and social network ties in organizational citizenship behavior. *Journal of Business Ethics*, 81, 561–578.

Linus, O. (2001). Marketing strategy effectiveness in Nigerian banks. *Academy of Marketing Studies Journal,* 5, 1, 23-30.

Litwinski, L. (1947). The psychology of 'mine.' *Philosophy,* 22, 83, 240-251.

Litwin, M. S. (1995). *How to measure survey reliability and validity*. Thousand Oaks, California: Sage Publications.

Liu, Y. (2009). Perceived organizational support and expatriate organizational citizenship behavior: The mediating role of affective commitment towards the parent company. *Personnel Review*, 38, 3, 307-319.

Lo, M., & Ramayah, T. (2009). Dimensionality of organizational citizenship behavior (OCB) in a multicultural society: The case of Malaysia. *International Business Research*, 2, 1, 48-55.

Locke, J. (1690). *Two treatises of government.* Oxford: Oxford University Press.

Locke, E. A. (1968). Towards a theory of task motivation and incentives: *Organizational behavior and human performance*, 3, 157–89.

Locke, E. A. (1976). The nature and causes of job satisfaction. In M. D. Dunnette (Ed.), Handbook of industrial and organizational psychology (pp. 1297–1350). Chicago: Rand McNally.

Lord, R. G., Brown, D. J. (2001). Leadership, values, and subordinate self-concepts. *Leadership Quarterly,* 12, 133–52.

Mackin, C. (1996). *Ownership theory: Rights and responsibilities of ownership. Annual report*. La Jolla, CA: Foundation for Enterprise Development.

MacKinnon, D. P., Lockwood, C. M., & Williams, J. (2004). Confidence limits for the indirect effect: Distribution of the product and resampling methods. *Multivariate Behavioral Research,* 39, 99–128.

Mael, F. A. & Tetrick, L. E. (1992). Identifying organizational identification. *Educational and Psychological Measurement*, 52, 813–824.

Malhotra, N. (1999). *Marketing Research: An applied orientation* (3rd ed.). New Jersey: Prentice Hall.

Marinova, S. V., Moon, H., & Van Dyne, L. (2010). Are all good soldier behaviors the same? Supporting multidimensionality of organizational citizenship behaviors based on rewards and roles. *Human Relations,* 63, 10, 1463–1485. DOI: 10.1177/0018726709359432.

Mary, R. M. I. T., & Linda, W. H. M. S., & Howard, G. N. I. H. (2009). Dealing with or reporting "unacceptable" behavior (with additional thoughts about the "Bystander

Effect). *Journal of the International Ombudsman Association* 2(1), online at ombudsassociation.org.

Mattanah, Jonathan F., Gregory R. Hancock, & Bethany L. Brand (2004). Parental attachment, separation-individuation, and college student adjustment: A structural equation analysis of mediational effects. *Journal of Counseling Psychology,* 51, 2, 213–225.

Marx, K. (1976). *The result of the immediate process of production*. England: Penguin.

Mayhew, M. G., Ashkanasy, N. M., Bramble, T. & Gardner, J. (2007). A study of the antecedents and consequences of psychological ownership in organizational settings. The *Journal of Social Psychology*, 147, 5, 477–500.

McCrae, R. R., & Costa, P.T. Jr (1987). Validation of the five factor model of personality across instruments and observers. *Journal of personality and social psychology*, 52, 81-90.

McDougall, W. (1923). *An introduction to social psychology.* (18th edition). London: Methuen.

McIntyre, N., Srivastava, A. & Fuller, J. A. (2009). The relationship of locus of control and motives with psychological ownership in organizations. *Journal of Managerial Issues*, XXI, 3, 383-401.

McClelland, D. C. (1951). *Personality.* New York: Henry Holt

Md-Sidin, S., Sambasivan, M. & Muniandy, N. (2010). Impact of psychological ownership on the performance of business school lecturers. *Journal of Education for Business*, 85, 50–56, DOI: 10.1080/08832320903217903.

Meyer, J. & Allen, N. (1991). A three-component conceptualization of organizational commitment. *Human Resource Management Review*, 1, 61–89.

Miller, K. L., & Smith, L. E. (1983). Handling non-response issues. *Journal of Extension*, 21(5), 45-50.

Mishra, S. K., Mishra, B., & Kumar, P. (2010). Traditional attitudinal variables matters for organizational citizenship behaviour among middle level managers. *Journal of the Indian Academy of Applied Psychology*, 36, 2, 255-261.

Moideenkutty, U. (2005). Organizational citizenship behavior and developmental experiences: Do role definitions moderate the relationship? *The Journal of Behavioral and Applied Management*, 6, 2, 91-108.

Molm, L., Nobuyuki T., & Gretchen P. (2000). Risk and trust in social exchange: an experimental test of a classical proposition *American Journal of Sociology*, 105, 1396–427.

Mooney, C. (1996). Bootstrap statistical inference: Examples and evaluations for political science. *American Journal of Political Science*, *40*, 2, 570-602.

Moorman, R. H. (1993). The influence of cognitive and affective based job satisfaction measures on the relationship between satisfaction and OCBs. *Human Relations*, 46, 6, 759-777.

Moorman, R. H., & Blakely, G. L. (1995). Individualism-Collectivism as an individual difference predictor of organizational citizenship behaviors. *Journal of Organizational Behavior*, 16, 127-142.

Moorman, R. H., Blakely, G. L., & Niehoff, B. P. (1998). Does perceived organizational support mediate the relationship between procedural justice and organizational citizenship behavior? *Academy of Management Journal,* 41, 3, 351-357.

Morrison, E. W. (1994). Role definitions and organizational citizenship behavior: The importance of the employee's perspective. *Academy of Management Journal*, 37, 1543–1567.

Morrison, E. W., & Phelps, C. C. (1999). Taking charge at work: Extra role efforts to initiate workplace change. *Academy of Management Journal,* 42, 403–419.

Morrow, P. C. (1983). Concept redundancy in organizational research: The case of work commitment. *Academy of Management Review,* 8, 486-500.

Murphy, G., Athanasou, J., & King, N. (2002). Job satisfaction and organizational citizenship behaviour: A study of Australian human-service professionals. *Journal of Managerial Psychology*, 17, 4, 287-297.

Nahum-Shani, I., & Somech, A. (2011). Leadership, OCB and individual differences: Idiocentrism and allocentrism as moderators of the relationship between transformational and transactional leadership and OCB. *The Leadership Quarterly,* 22, 353–366.

Neubert, M. J., Kacmar, K. M., Carlson, D. S., Chonko, L. B., & Roberts, J. A. (2008). Regulatory focus as a mediator of the influence of initiating structure and servant leadership on employee behavior. *Journal of Applied Psychology*, 93, 1220–1233.

Ng, K.Y., & Van Dyne, L. (2005). Antecedents and performance consequences of helping behavior in work groups: A multi-level analysis. *Group and Organization Management,* 30, 514-540.

Nigeria Population Commission (2006). Retrieved 20 August 2011, from http://en.wikipedia.org/wiki/List_of_Nigerian_states_by_population

Novicevic, M. M., Harvey, M. G., Buckley, M. R., Brown, J. A. & Evans, R. (2006). Authentic Leadership: A Historical Perspective. *Journal of Leadership & Organizational Studies, 13*, 1, 64-76.

Nunnally, J.C. (1967). *Psychometric theory.* McGraw-Hill, New York.

O'Driscoll, M. P., Piece, J. L. & Coghland, A. (2006). The psychology of ownership: Work environment structure, organizational commitment and citizenship behaviors. *Group and Organization Management*, 31, 3, 388-416.

Okeola, O. G. & Salami, A. W. (2012). A pragmatic approach to the Nigeria's engineering infrastructure dilemma. Epistemics in science, engineering and technology. *Webs Journal,* 2, 1, 55-61. Available on line at http://www.epistemicsgaia.webs.com or epistemics3@aol.com.

Omar, A. (2011). Servant leadership of the Prophet Muhammad (pbuh). Muslim Sermon delivered on Friday 11th February/8th Rabi` al-Awwal 1432 at Islamic Center of Michiana, South Bend, USA.

Oppenheim, A. N. (1966). *Questionnaire design and attitude measurement.* New York: Basic Books, Inc.

O'Reilly, C. III., & Chatman, J. (1986). Organizational commitment and psychological

attachment: The effects of compliance, identification, and internalization on prosocial behavior. *Journal of Applied Psychology*, 71, 492–499.

Orabuchi, A (2005). Poor healthcare system: Nigeria's moral indifference. Retrieved April 12, 2012 from http://www.kwenu.com/publications/orabuchi/poor_ healthcare.htm.

Organ, D. W., & Lingl, A. (1995). Personality, satisfaction and organizational citizenship behavior. *Journal of Social Psychology*, 135, 3, 339-350.

Organ, D. W. (1994). Personality and organizational citizenship behavior. *Journal of Management*, 20, 2, 465-478.

Organ, D. W. (2005). The impact of leadership and work environments on OCB. Retrieved March 10, 2011, from http://www.sagepub.com/upm-data/5862_Chapter_5__Organ_I_Proof_3.pdf.

Organ, D. W., Podsakoff, P. M., & Mackenzie, S. B. (2006). *Organization citizenship behavior: Its nature, antecedents, and consequences*. Thousand Oaks. California: Sage Publication, Inc.

Organ, D. W. (1988). *Organizational citizenship behavior: The good soldier syndrome*. Lexington, MA: Lexington Books.

Organ, D.W. (1997). Organizational citizenship behavior: it's construct clean-up time. *Human Performance*, 10, 2, 85-97.

Organ, D. W. (1990). The motivational basis of organizational citizenship behavior. In B. Staw & L. Cummings (Eds.), *Research in organizational behavior*, 12, 43-72. Greenwich, CT: JAI Press.

Organ, D. W., & Ryan, K. (1995). A meta-analytic review of attitudinal and dispositional predictors of organizational citizenship behavior. *Personnel Psychology, 48*(4), 775-802. Doi.org/10.1111/j.1744-6570.1995.tb01781.x.

Osborne, J. W. (2010). Improving your data transformations: Applying the box-cox transformation. *Practical Assessment, Research & Evaluation,* 15, 12, 1-9.

Page, D. & Wong, P. T. P. (2000). A conceptual framework for measuring servant leadership. In S. Adjibolooso (Ed.), *The human factor in shaping the course of history and development* (pp. 69−110). Washington, DC: American University Press.

Paillé, P. (2011). Perceived stressful work, citizenship behavior and intention to leave the organization in a high turnover environment: Examining the mediating role of job satisfaction. *Journal of Management Research*, 3, 1, 1-16.

Paillé, P. (2009). Assessing organizational citizenship behavior in the French context: Evidence for the four-dimensional model. *The Journal of Psychology*, 143, 2, 133-146.

Paille´, P., Bourdeau, L., & Galois, I. (2010). Support, trust, satisfaction, intent to leave and citizenship at organizational level: A social exchange approach. *International Journal of Organizational Analysis*, 18, 1, 41-58.

Paré, G. & Tremblay, M. (2007). The influence of high-involvement human resources practices, procedural justice, organizational commitment, and citizenship behaviors on information technology professionals' turnover intentions. *Group & Organization Management*, 32, 3, 326-357.

Parker, S. K., Wall, T. D. & P. R. Jackson (1997). That's not my job: developing flexible employee work orientations. *Academy of Management Journal*, 40, 899-929.

Patterson, K. (2003). Servant leadership: A theoretical model. Unpublished doctoral dissertation, Regent University, Virginia Beach, VA.

Paullay, I., Alliger, G., & Stone -Romero, E. (1994). Construct validation of two instruments designed to measure job involvement and work centrality. *Journal of Applied Psychology*, 79, 224-8.

Pearl, D. K., & Fairley, D. (1985). Testing for the potential for non-response bias in sample surveys. *Public Opinion Quarterly, 49, 4, 553-560. Doi: 10.1086/268950.*

Peng, J., & Chiu, S. (2010). An integrative model linking feedback environment and organizational citizenship behavior. *The Journal of Social Psychology*, 150, 6, 582-607.

Peng, Z., & Zhao, H. (2012). Does organization citizenship behavior really benefit the organization? Study on the compulsory citizenship behavior in China. *Nankai Business Review International,* 3, 1, 75-92. DOI 10.1108/20408741211201935.

Peters, T., & Austin, N. (1985). *A passion for excellence*. New York: Random House.

Peters, T. (1988). The leadership alliance [Motion picture]. (Available from the Richardson Company, 13 Creekwood Ln., SW, Lakewood, CA 98499).

Phokhwang, W. (2008). Information needs and uses of Thai nurses: A national sample survey. A dissertation submitted to the faculty of University of North Carolina at Chapel Hill in partial fulfillment of the requirements for the degree of Doctor of Philosophy in the School of Nursing Chapel Hill.

Pierce, J. L., Kostova, T., Dirks, K. T. (2001). Toward a theory of psychological ownership in organizations. *The Academy of Management Review,* 26, 2, 298-310.

Pierce, J. L., & Rodgers, L. (2004). The psychology of ownership and worker-owner productivity. *Group & Organization Management*, 29, 5, 588-613. Doi: 10.1177/1059601103254270.

Pierce, J. I., Jussila, I., & Cummings, A. (2009). Psychological ownership within the job design context: revision of the job characteristics model. *Journal of Organizational Behavior*, 30, 477–496.

Pierce, J. L., Kostova, T., & Dirks, K. T. (2003). The state of psychological ownership: Integrating and extending a century of research. *Review of General Psychology*, 7, 1, 84–107.

Pierce, J. L., Rubenfeld, S. A., & Morgan, S. (1991). Employee ownership: A conceptual model of process and effects. *Academy of Management Review*, 16, 121–144.

Pierce, J. L., Van Dyne, L., & Cummings, L. L. (1992). Psychological ownership: A construct validation study. In M. Schnake (Ed.) Proceedings of the Southern Management Association (pp. 203-211). Valdosta, GA: Valdosta State University.

Pierce, J. I., O'Driscoll, M. P., & Coghlan, A. (2004). Work environment structure and psychological ownership: The mediating effects of control. *The Journal of Social Psychology*, 144, 5, 507–534.

Podsakoff, P. M., Ahearne, M., & Mackenzie, S. B. (1997). Organizational citizenship behavior and the quantity and quality of work group performance. *Journal of Applied Psychology*, 82, 2, 262-270.

Podsakoff, P. M., MacKenzie, S. B., Paine, J. B., & Bachrach, D. G. (2000). Organizational citizenship behaviors: A critical review of the theoretical and empirical literature and suggestions for future research. *Journal of Management*, 26, 3, 513–563.

Podsakoff, P. M., Mackenzie, S. B., & Boomer, W. (1996). A meta - analysis of the relationships between Kerr and Jermier's substitutes for leadership and employee job attitudes, role perceptions, and performance. *Journal of Applied Psychology,* 81, 380 -399.

Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. Journal of Applied Psychology, 88, 879–903. Doi:10.1037/0021-9010.88.5.879

Pollard, C. W. (1996). *The soul of the firm*. Grand Rapids, MI: Harper Business & Zondervan Publishing House.

Porteous, J. D. (1976). Home: The territorial core. *Geographical Review*, 66, 383-390.

Porter, L. W., & E. E. Lawler (1968). *Management attitudes and performance*. Homewood. IL: Dorsey Press.

Pratt, M. G., & Dutton, J. E. (2000). Owning up or opting out: The role of emotions and identities in issue ownership. In N. M. Ashkanasy & C. E. Haertel (Eds.), *Emotions in the workplace: Research, theory, and practice* (pp. 104–129). Westport, CT: US Quorum Books.

Preacher, K. J., & Hayes, A. F. (2004). SPSS and SAS procedures for estimating indirect effects in simple mediation models. Behavior Research Methods, Instruments, & Computers, 36(4), 717–731.

Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods,* 40, 879–891.

Prelinger, E. (1959). Extension and structure of the self. *The Journal of Psychology*, 47, 13-23.

Rafik, B., & Badawi, J. A. (1999). *Leadership: An Islamic perspective.* Beltsville: Amana Publications.

Ramadan, T. (2007). *Islamic ethics.* UK: Oxford University Press.

Ramalu, S. (2010). Relationships between cultural intelligence, personality, cross-cultural adjustment and job performance amongst expatriates in Malaysia. Unpublished doctoral dissertation, University Putra Malaysia.

Ramayah, T., Lee, J. W. C. & In, J. B. C. (2011). Network collaboration and performance in the tourism sector. Service Business, 5, 411–428.

Rasmussen, J. L. (1988). Bootstrap confidence intervals: Good or bad?': Comments on Efron (1988) and Strube (1988) and further evaluations. *Psychological Bulletin,* 104, 2, 297-9.

Raub, S. (2008). Does bureaucracy kill individual initiative? The impact of structure on organizational citizenship behavior in the hospitality industry. *International Journal of Hospitality Management*, 27, 179–186.

Reb, J., & Connolly, T. (2007). Possession, feelings of ownership and the endowment effect. *Judgment and Decision Making,* 2, 2, 107–114.

Richardson, J. T. E. (2005). Instruments for obtaining student feedback: A review of the literature. *Assessment & Evaluation in Higher Education* 30, 4, 387–415.

Riketta, M. (2008). The causal relation between job attitudes and performance: A meta-analysis of panel studies. *Journal of Applied Psychology*, 93, 2, 472–481.

Ringim, K. J., Razalli, M. R., & Hasnan, N. (2012). Effect of the business process reengineering factors and information technology capability on organizational performance. Unpublished PhD Thesis of Universiti Utara Malaysia page 1 - 439 Uiversiti Utara Malaysia Sintok.

Ringle, C. M., Wende, S., & Will, A. (2005). SmartPLS 2.0. Retrieved May 23, 2012 from www.smartpls.de.

Robbins, S. P., & Judge, T. A. (2007). *Organizational Behavior* (12th ed.). Saddle River, NJ: Prentice Hall.

Roscoe, J. T. (1975). *Fundamental Research Statistics for the Behavioural Sciences*, 2nd edition. New York: Holt Rinehart & Winston.

Roethlisberger, F. J., & Dickson, W. J. (1939). Management and the Worker (Harvard University Press, Cambridge, MA).

Rosenfeld, P. R., Giacalone, R. A., & Riordan, C. A., (1995). *Impression management in organizations: theory, measurement and practice.* New York: Routledge.

Rossotti, C. O. (2005). *Many unhappy returns: One man's quest to turn around the most unpopular organization in America*, Boston: Harvard Business School Press.

Rousseau, D. M. (1989). Psychological and implied contracts in organizations. *Employee Responsibilities and Rights Journal*, 2, 121-139.

Rowold, J. & Heinitz, K. (2007). Transformational and charismatic leadership: Assessing the convergent, divergent and criterion validity of the MLQ and the CKS. *Leadership Quarterly*, 18, 121–133.

Rotundo, M., & Sackett, P. R. (2002). The relative importance of task, citizenship, and counterproductive performance to global ratings of job performance: A policy-capturing approach. *Journal of Applied Psychology*, 87, 66–80.

Rudmin, F. W., & Berry, J. W. (1987). Semantics of ownership: A free-recall study of property. *The Psychological Record,* 37, 257-268.

Russell, R. F. (2000). Exploring the values and attributes of servant leaders. *Dissertation Abstracts International, 61* (12), 4856A. (UMI No. 9999498).

Russell, R., & Stone, G. A. (2002). A review of servant leadership attributes: Developing a practical model. *Leadership and Organizational Development Journal, 23*(3), 145-157.

Sackett, P. R. (2002). The structure of counterproductive work behaviors: Dimensionality and relationships with facets of job performance. *International Journal of Selection and Assessment*, 10, 5–11.

Salant, P. & Dillman, D. A. (1994). *How to conduct your own survey.* New York: Wiley.

Salkind, N. J. (1997). *Exploring research* (3rd ed.). Upper Saddle River, NJ: Prentice Hall.

Salkind, N. J. (2003). Exploring research. ISBN-10: 0130983527 USA.

Sankar, Y. (2003). Character not charisma is the critical measures of leadership excellence. *Journal of Leadership & Organizational Studies, 9*(4), 45-49.

Sartre, J. P. (1969). *Being and nothingness: A phenomenological essay on ontology.* New York: Philosophical Library/London: Methuen.

Scandura, T. A. & Schriesheim, C. A. (1994). Leader-member exchange and supervisor career mentoring as complementary concepts in leadership research. *Academy of Management Journal*, 37, 1588-602.

Schriesheim, C. A., & Neider, L. L. (1996). Path-goal theory: The long and winding road. *Leadership Quarterly,* 7, 317-321.

Schriesheim, C. A., Castro, S. L., & Cogliser, C. C. (1999). Leader-member exchange (LMX) research: a comprehensive review of theory, measurement, and dataanalytic practices. *Leadership Quarterly,* 10, 63−82.

Schlechter, A. F., & Engelbrecht, A. S. (2006). The relationship between transformational leadership, meaning & OCB. *Management Dynamics*, 15, 4, 2-16.

Schnake, M. (1991). Organizational citizenship: A review, proposed model, and research agenda. *Human Relations*, 44, 735–759.

Schwab, D. P. (2005). *Research methods for organizational studies* (2nd ed.). Mahwah, NJ: Lawrence Erlbaum Associates.

Schlechter, A. F. & Engelbrecht, A. S. (2006). The relationship between transformational leadership, meaning & OCB. *Management Dynamics*, 15, 4, 2-16.

Scott, S. G., Bruce, R. A. (1994). Determinants of innovative behavior: A path model of individual innovation in the workplace. *Academy of Management Journal,* 37, 3, 580–607.

Sekaran, U. (2003). *Research methods for business: A skill building approach* (4thedition). New Jersey: John Wiley and Sons.

Sekaran, U. & Bougie, R. (2010). *Research methods for business*. A sill building approach (5th ed.) John Willey: UK.

Seligman, M. E. P. (1975). *Helplessness*. San Francisco: Freeman.

Sendjaya, S., & Sarros, J. (2002). Servant leadership: Its origin, development, and application in organizations. *Journal of Leadership and Organization Studies, 9*(2), 57-64.

Sendjaya, S., Sarros, J. C., & Santora, J. C. (2008). Defining and measuring servant leadership behavior in organizations. *Journal of Management Studies*, 45, 2, 402-424.

Sesen, H., Cetin, F., & Basim H. N., (2011). The effect of burnout on organizational citizenship behavior: The mediating role of Job satisfaction. *International Journal of Contemporary Economics & Administrative Sciences* 1(1), 40-64.

Shamir, B., House, R., & Arthur, M. B. (1992). The motivational effects of charismatic leadership: A self-concept based theory. *Organization Science*, 4, 577–594.

Shamir, B., House, R. J., & Arthur, M. B. (1993). The motivational effects of charismatic leadership: A self-concept based theory. *Organization Science,* 4, 4, 577-594.

Sheikh, K. (1981). Investigating non-response bias in mail surveys. *Journal of Epidemiology and Community Health,* 35, 293-296.

Shekari, H., & Nikooparvar, M. Z. (2012). Promoting leadership effectiveness in organizations: a case study on the involved factors of servant leadership. *International Journal of Business Administration*, 3, 1, 54-65.

Shrout, Patrick E. and Niall Bolger (2002). Mediation in experimental and nonexperimental studies: New procedures and recommendations. *Psychological Methods*, 7, 4, 422–445.

Sims, H. P., Jr., & Manz, C. C. (1996). Company of heroes: Unleashing the power of selfleadership. New York: Wiley.

Sindhu, S., & Pookboonmee, R. (2001). Barriers to research utilization of Thai nurses. *Journal of Nursing Research*, 74-84.

Singer, E. (2006). Non-response bias in household surveys. *Public Opinion Quarterly*, 70, 5, Special Issue, 637–645.

Singh, A. K., & Singh, A. P. (2008). Personal outcome. *ASBM Journal of Management*, 1, 1, 47-56.

Skarlicki, D. P., & Latham, G. P. (1997). Leadership training in organizational justice to increase citizenship behavior within a labor union: A replication. *Personnel Psychology*, 50, 617-633.

Smircich, L. (1983). Concepts of culture and organizational effectiveness. *Administrative Science Quarterly,* 28, 3, 339-58.

Smith, C. A., Organ, D. W. & Near, J. P. (1983). Organizational citizenship behavior: Its nature and antecedents. *Journal of Applied Psychology*, 68, 4, 653-663.

Smith, E., Loftin, R., Murphy-Hill, E., Bird, C., & Zimmermann, T. (2013). Improving developer participation rates in surveys. www.cabird.com/papers/smith2013 *chase.pdf*.

Sobel, M. E., (1982). Asymptotic confidence intervals for indirect effects in structural equation models. In S. Leinhardt (Ed.), *Sociological methodology,* 290–312).

Sosik, J. J. (2005). The role of personal values in the charismatic leadership of corporate managers: A model and preliminary field study. *The Leadership Quarterly*, 16, 221-244.

Spears, L. C. (1996). Reflections on Robert K Greenleaf and servant leadership. *Leadership and Organisational Development Journal,* 17, 7, 33-35. http://dx.doi.org/10.1108/01437739610148367.

Spreitzer, G. M. (1995). Psychological empowerment in the workplace: Dimensions, measurement, and validation. *Academy of Management Journal*, 38, 1442–1465.

Stamper, C. L., & Van Dyne, L. (2001). Work status and organizational citizenship behavior: A field study of restaurant employees. *Journal of Organizational Behavior*, 22, 5, 517-536.

Starkweather, J. (2011). An alternative modeling strategy: Partial least squares. Retrieved May 16, 2013 from www.unt.edu/rss/class/Jon/Benchmarks/PLS_JDS_ July2011.pdf.

Stogdill, R. M., (1975). *Handbook of leadership,* Glencoe, Ill: Free Press.

Stone, A. G., Russell, R. F., & Patterson, K. (2004). Transformational versus servant leadership: A difference in leader focus. *The Leadership & Organization Development Journal*, 25, 4, 349-361.

Straub, D. W. (1989). Validating instruments in MIS research. *MIS Quarterly*, 13, 2,147-169.

Strauch, R. (1991). The somatic dimensions of emotional healing. Retrieved March 23, 2013 from www.somatic.comhttp.

Sulea, C., Virga, D, Maricutoiu, L. P., Schaufeli, W., Dumitru, C. Z., & Sava, F. A. (2012). Work engagement as mediator between job characteristics and positive and negative extra-role behaviors. *Career Development International,* 17, 3, 188-207. DOI 10.1108/13620431211241054.

Sun, L., Chow, I, H., S., Chiu, R. K., & Pan, W. (2013). Outcome favorability in the link between leader–member exchange and organizational citizenship behavior: Procedural fairness climate matters. *The Leadership Quarterly,* 24, 215–226.

Suresh, S., & Venkatammal, P. (2010). Antecedents of organizational citizenship behavior. *Journal of the Indian Academy of Applied Psychology*, 36, 2, 276-286.

Tabachnick, B. G. & Fidel, L. S. (2007). *Using multivariate statistics* (5th ed.). Boston: Pearson Education Inc.

Takeuchi, R., Chen, G., & Lepak, D. P. (2009). Through the looking glass of a social system: Cross-level effects of high-performance work systems on employees' attitudes. *Personnel Psychology*, 62, 1–29.

Tedeschi, T. J., & Reiss, M. (1981). Verbal tactics impression management. In C. Antaki (Ed.), *Ordinary Explanations of Social Behavior* (pp. 271-326). London: Academic Press.

Tenenhaus M., Amato S., & Esposito Vinzi, V. (2004). A global goodness-of-fit index for PLS structural equation modelling, in proceedings of the XLII SIS Scientific Meeting Vol. Contributed Papers, CLEUP, Padova, 739-742.

Tenenhaus M., Esposito Vinzi V., Chatelin Y.M., & Lauro C. (2005). PLS path modeling. *Computational Statistics and Data Analysis,* 48, 159-205.

Ticehurst, G. W. & Veal, A. J. (1999). *Business research methods a managerial approach*. NSW Australia: Addison Wesley Longman.

Todd, S. Y., & Kent, A. (2006). Direct and indirect effects of task characteristics on organizational citizenship behaviors. *North American Journal of Psychology*, 8, 2, 253-268.

Tore, D. (2005). An empirical investigation of the key factors for success in software process improvement. *IEEE Transactions on Software Engineering*, 31, 5, 410-424.

Triandis, H. C. (1995). *Individualism and collectivism*. Boulder, CO: Westview Press.

Trivers, G. A., (2009). Servant leadership effects on trust and organizational citizenship behaviors. A Dissertation Doctor of Business Administration, Faculty of Argosy University Seattle.

Trochim, W. M. K. (1999). *The research knowledge base* (2nd ed.). Ithaca, NY: Cornell University Custom Publishing.

309

Tuan, Y. (1984). *Dominance and affection: The making of pets.* New Haven, CT: Yale University Press.

Tureman, D. (2013). The effectiveness of servant leadership in bringing about change. A Senior Thesis submitted in partial fulfillment of the requirements for graduation in the Honors Program Liberty University, spring 2013.

Turnipseed, D. (1996). Organization citizenship behaviour: An examination of the influence of the workplace. *Leadership & Organization Development Journal*, 17, 2, 42–47.

Taylor, F.W. (1919). *Scientific Management*. New York: Harper & Row.

Ueda, Y. (2011). Organizational citizenship behavior in a Japanese organization: The effects of job involvement, organizational commitment, and collectivism. *Behavioral Studies in Business*, 4, 1-14.

UNICEF (2007). Information sheet: Girls' education. A UNICEF Report produced by Nigeria Country Office, September 2007.

Van Dyne, L., Graham, J. W., & Dienesch, R. M. (1994). Organizational citizenship behavior: Construct redefinition, measurement, and validation. *Academy of Management Journal,* 37, 765–802.

Van Dyne, L., Cummings, L. L. & Parks, J. M. (1995). Extra-role behaviors: In pursuit of construct and definitional clarity (A bridge over muddied waters). In L.L. Cummings & B.M. Staw (Eds), *Research in organizational behavior* (Vol. 17), pp. 215-285. Greenwich, CT: JAI Press.

Van Dyne, L., & LePine, J. A. (1998). Helping and voice extra-role behaviors: evidence of construct validity and predictive validity. *Academy of Management Journal* 37, 4, 765-802.

Van Dyne, L., Kossek, E., & Lobel, S. (2007). Less Need to be there: Cross-level effect of work practices that support work-life flexibility and enhance group processes and group-level organizational citizenship behaviors. *Human Relations*, 60, 8, 1123-1154.

Van Dyne, L. & Pierce, J. I. (2004). Psychological ownership and feelings of possession: Three field studies predicting employee attitudes and organizational citizenship behavior. *Journal of Organizational Behavior*, 25, 439-459.

Vandewalle, D., Van Dyne, L. & Kostova, T. (1995). Psychological ownership: An empirical examination of its consequences. *Group & Organization Management*, 20, 210–226.

Van Scotter, J. R., & Motowidlo, S. J. (1996). Interpersonal facilitation and job dedication as separate facets of contextual performance. *Journal of Applied Psychology*, 81, 525-531.

Vigoda-Gadot, E. (2007a). Leadership style, organizational politics, and employees' performance. An empirical examination of two competing models. *Personnel Review*, 36, 5, 661-683.

Vigoda-Gadot, E. (2007b). Redrawing the boundaries of OCB? An empirical examination of compulsory extra-role behavior in the workplace. *Journal of Business and Psychology*, 21, 3, 377 - 405.

Vigoda-Gadot, E., Beeri, I., Birman-Shemesh, T. & Somech, A. (2007). Group-level organizational citizenship behavior in the education system: A scale reconstruction and validation. Educational *Administration Quarterly,* 43, 462-493.

Vinod, S., & Sudhakar, B. B. (2011). Servant leadership: A unique art of leadership! *Interdisciplinary Journal of Contemporary Research in Business, 2*, 11, 456-467.

Viswesvaran, C., & Ones, D. S. (2000). Perspectives on models of job performance. *International Journal of Selection and Assessment*, 8, 216–226.

Vondey, M. (2010). The relationships among servant leadership, organizational citizenship behavior, person-organization fit, and organizational identification. *International Journal of Leadership Studies*, 6, 1, 3-27.

Vroom, V. H. (1964). *Work and motivation*. New York, NY: Wiley.

Vroom, V. H., & Yetton, P. W. (1973). *Leadership and decision making.* Pittsburgh: University of Pittsburgh Press.

Vroom, V. H., & Jago, A. G. (1988). *The new leadership: Managing participation in organizations.* Englewood Cliffs, NJ: Prentice-Hall.

Wagner, S. H., Parker, C. P., & Christianson, N. D. (2003). Employees that think and act like owners: Effects of ownership beliefs and behaviors on organizational effectiveness. *Personnel Psychology*, 56, 847–871.

Walumbwa, F. O., Avolio, B. J., & Zhu, W. (2008). How transformational leadership weaves its influence on individual job performance: The role of identification and efficacy beliefs. *Personnel Psychology,* 61, 793–825.

Walumbwa, F. O., Cropanzano, R., & Hartnell, C. A. (2009). Organizational justice,

voluntary learning behavior, and job performance: A test of the mediating effects of identification and leader-member exchange. *Journal of Organizational Behavior,* 30, 1103-1126.

Walumbwa, F. O., Hartnell, C. A. & Oke, A. (2010). Servant leadership, procedural justice climate, service climate, employee attitudes, and organizational citizenship behavior: A cross-level investigation. *Journal of Applied Psychology*, 95, 3, 517-529.

Walz, S. M., & Niehoff, B. P. (1996). Organizational citizenship behaviors and their effect on organizational effectiveness in limited-menu restaurants. *Academy of Management Best Paper Proceedings, 56th Annual Meeting, Cincinnati,*

*OH,* 307–311.

Warren, C. K., Chiu, C., Hui, H. & Lai, G. W. F. (2007). Psychological ownership and organizational optimism amid China's corporate transformation: Effects of an employee ownership scheme and a management dominated board. *International Journal of Human Resource Management*, 18, 303–320.

Wat, D., & Shaffer, M. A. (2005). Equity and relationship quality influences on organizational citizenship behaviors: The mediating role of trust in the supervisor and empowerment. *Personnel Review*, 34, 4, 406-422.

Waterman, H. (2011). Principles of servant leadership and how they can enhance practice. *Nursing management*, 17, 9, 24-26.

Weber, M. (1947). *The theory of social and economic organization*. (A. M. Henderson and T. Parsons, Trans.). New York: Oxford University Press.

Weil, S. (1952). *The need for roots: Prelude to a declaration of duties towards mankind.* London: Routledge and Kegan Paul.

Werner A (2007). Organizational behavior: A contemporary South African perspective. *Pretoria: Van Schaik Publishers.*

White, R. W. (1959). Motivation reconsidered: The concept of competence. *Psychological Review,* 66, 297-330.

Williams, E. S., Rondeau, K. V. & Francescutti, L. H. (2007). Impact of culture on commitment, satisfaction, and extra-role behaviors among Canadian ER physicians. *Leadership in Health Services*, 20, 3, 147-158.

Williams, L. J. & Anderson, S. E. (1991). Job satisfaction and organizational commitment as predictors of organizational citizenship behaviors and in-role behaviors. *Journal of Management*, 17, 3, 601-617.

Winston, B. E. (2002). *Be a leader for God"s sake.* Virginia Beach, VA: Regent University-School of Leadership Studies.

Winston, B. E. & Patterson, K. (2006). An integrative definition of leadership. *International Journal of Leadership Studies*, 1, 2, 6-66.

Wold, H. (1982). Soft modeling: The basic design and some extensions. In Jo¨reskog, K.G., & Wold, H. E. (Eds), *Systems under indirect observation: causality, structure, prediction.* North-Holland Publishing Company: Amsterdam.

Wold, H. (1985). Systems analysis by Partial Least Squares. In P.Nijkamp, H. Leitner & N. Wrigley (Eds.), *Measuring the unmeasurable*: 221-252. Martinus Nijhoff: Dordrecht.

Wollan, M. L., Sully de Luque, & Grun hagen, M. (2009). Motives for helping: Exploring cultural influences on extra-role behaviors. *Journal of Multinational Business Review*, 17, 1, 99-119.

Wood, C. M. (2003). The effects of creating psychological ownership among students in group projects. *Journal of Marketing Education*, 25, 3, 241-249. Doi: 10.1177?0273475303257553.

Wood, R. E., & Bandura, A. (1989). Impact of conceptions of ability on self-regulatory mechanisms and complex decision making. *Journal of Personality and Social Psychology, 56,* 407-415.

Wofford, J. C., & Liska, L. Z. (1993). Path-goal theories of leadership: A meta-analysis. Journal of Management, 19, 857– 876.

World Bank (1994), *World Report 1994*, New York: Oxford University Press.

Wright, P. M., George, J. M., Farnsworth, S. R., & McMahan, G. C. (1993). Productivity and extra-role behavior: The effects of goals and incentives on spontaneous helping", *Journal of Applied Psychology,* 78, 3, 374-81.

Yen, C., & Teng, H. (2013). The effect of centralization on organizational citizenship behavior and deviant workplace behavior in the hospitality industry. *Tourism Management*, 36, 401-410.

Yılmaz, K. & Tas¸dan, M. (2009). Organizational citizenship and organizationaljustice in Turkish primary schools. *Journal of Educational Administration*, 47, 1, 108-126. Yu, C., & Chu, T. (2007). Exploring knowledge contribution from an OCB perspective. *Information and Management*, 44, 321–331.

Yukl, G. (1994). *Leadership in Organizations (3rd ed.)*. Englewood Cliffs, NJ: Prentice-Hall.

Yukl, G. (1998). *Leadership in organizations.* Englewood, Cliffs, NJ: Prentice-Hall.

Yukl, G. (1999). An evaluation of conceptual weaknesses in transformational and charismatic leadership theories. *Leadership Quarterly,* 10, 2, 285-305.

Yun, S., Cox, J., Sims, Jr., H. P. & Salam, S. (2007). Leadership and teamwork: The effects of leadership and job satisfaction on team citizenship. *International Journal of Leadership Studies*, 2, 3, 71-193.

Yunus, N. H. (2012). Displaying employees' organizational citizenship behaviour: the impact of emotional intelligence and leader-member exchange in development Bank in Malaysia. *International Journal of Social Science and Humanity,* 2, 4, 344-349.

Zalesnik, A. (1977). Managers and leaders: Are they different? *Harvard Business Review,* 55, 5, 67-80.

Zhang, X., Walumbwa, F. O., Aryee, S., Chen, Z. X. (2013). Ethical leadership, employee citizenship and work withdrawal behaviors: Examining mediating and moderating processes. *The Leadership Quarterly*, 24, 284–297.

Zhao, X., Lynch, J. G., & Chen, Q. (2010). Reconsidering Baron and Kenny: Myths and truths about mediation analysis. *Journal of Consumer Research,* 37, 197-206. DOI:10.1086/651257.

Zheng, W., Zhang, M., & Li. (2012). Performance appraisal process and organizational citizenship behavior. *Journal of Managerial Psychology*, 27, 7, 732-752. DOI 10.1108/02683941211259548.

Zikmund, W. G. (2000). *Business Research Methods* (6th edition). USA: Harcourt.

Zikmund, W. G., Babin, B. J., Carr, J. C., & Griffin, M. (2010). *Business Research Methods*, 8 ed. Canada: South-Western, Cengage Learning.

Zaccaro, S., & Horn, Z. (2003). Leadership theory and practice: Fostering an effective symbiosis. *Leadership Quarterly*, 14, 6, 769-806.

Zoghbi-Manrique de Lara, P. (2008). Fairness, teachers' non-task behavior and alumni satisfaction: The influence of group commitment. *Journal of Educational Administration,*46, 4, 514-538.

Zoghbi-Manrique-de-Lara, P., & Melia´n-Gonza´lez, S. (2009). The role of anomia on the relationship between organizational justice perceptions and organizational citizenship online behaviors. *Journal of Information, Communication & Ethics in Society*, 7, 1, 72-85.

**APPENDIX A: RESEARCH QUESTIONNAIRE**

# PHD RESEARCH QUESTIONNAIRE

## ABDU JA'AFARU BAMBALE

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**ACADEMIC RESEARCH QUESTIONNAIRE**

**COLLEGE OF BUSINESS, UNIVERSTI UTARA MALAYSIA, SINTOK, KEDAH,**

**MALAYSIA**

**Dear Respondent,**

This questionnaire is designed purely for academic research purpose. It is meant to aid in data collection that can satisfy requirement for award of PhD degree in Human Resource Management. The questionnaire is designed to source data for testing the relationship among three main factors in your organization, namely: servant leadership, feeling of ownership for the organization (psychological ownership) and organizational citizenship behavior (OCB). Your responses will be strictly treated as confidential and, therefore, your identity is not required.

Thank you in anticipation of cooperation and assistance.

**Abdu Ja'afaru Bambale**

**Researcher**

# PART A: Servant Leadership Questionnaire

**Instructions:** Below are statements that describe how you perceive the behavior of your supervisor right now. Please use the following scales to indicate your level of agreement or disagreement with each statement :1= Strongly disagree; 2= Partly disagree; 3= Disagree; 4= Undecided; 5= Partly agree; 6= Agree; and 7= Strongly agree.

| S/N | Scale Item | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|------|-----------|---|---|---|---|---|---|---|
| SL1. | I would seek help from my manager if I had a personal problem | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| SL2. | My manager/ supervisor cares about my personal well-being | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| SL3. | My manager takes time to talk to me on a personal level | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| SL4. | My manager/ supervisor can recognize when I'm in problem without asking me | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| SL5. | My manager/ supervisor emphasizes the importance of giving back to the community | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| SL6. | My manager/ supervisor is always interested in helping people in our community | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| SL7. | My manager/ supervisor is involved in community activities | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| SL8. | I am encouraged by my manager/ supervisor to volunteer in the community | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| SL9. | My manager/ supervisor can tell if something is going wrong in the organization | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| SL10. | My manager/ supervisor is able to effectively think | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

| | through complex problems | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| SL11. | My manager/ supervisor has a thorough understanding of our organization and its goals | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| SL12. | My manager/ supervisor can solve work problems with new or creative ideas | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| SL13. | My manager/ supervisor gives me the responsibility to make important decisions about my job | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| SL14. | My manager/ supervisor encourages me to handle important work decisions on my own | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| SL15. | My manager/ supervisor gives me the freedom to handle difficult situations in the way that I feel is best | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| SL16. | My manager/ supervisor provides me with work experiences that enable me to develop new skills | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| SL17. | My manager/ supervisor wants to know about my career goals | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| SL18. | My manager/ supervisor seems to care more about my success than his/her own | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| SL19. | My manager/ supervisor puts my best interests ahead of his/her own | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| SL20. | My manager/ supervisor sacrifices his/her own interests to meet my needs | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| SL21. | My manager/ supervisor does what | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | she/he can do to make my job easier | | | | | | | |
| SL22. | My manager/ supervisor holds high ethical standards | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| SL23. | My manager/ supervisor is always honest | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| SL24. | When I have to make an important decision at work, I do not have to consult my manager/ supervisor first | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| SL25. | My manager/ supervisor makes my career development a priority | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| SL26. | My manager/ supervisor is interested in making sure that I achieve my career goals | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

# PART B: Psychological Ownership Questionnaire (POQ)

**Instructions:** Below are statements that describe how you may think about yourself in relation to your working place right now. Please use the following scales to indicate your level of agreement or disagreement with each statement :1= Strongly disagree; 2= Partly disagree; 3= Disagree; 4= Undecided; 5= Partly agree; 6= Agree; and 7= Strongly agree.

| S/N | Scale Item | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|-----|-----------|---|---|---|---|---|---|---|
| PO1. | This is MY organization | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| PO2. | I sense that this organization is OUR organization | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| PO3. | I feel a very high degree of personal ownership for this organization | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| PO4. | I sense that this organization is MY organization | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| PO5. | This is OUR organization | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| PO6. | Most of the people that work for this organization feel as if they own the company | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| PO7. | It is hard for me to think about this organization as MINE. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

**PART C: Organizational Citizenship Behavior Questionnaire (OCBQ)**

**Instructions:** Below are statements that describe how you may think about yourself right now in terms of helping behavior toward colleagues or the organization. Please use the following scales to indicate your level of agreement or disagreement with each statement :1= Strongly disagree; 2= Partly disagree; 3= Disagree; 4= Undecided; 5= Partly agree; 6= Agree; and 7= Strongly agree.

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| OCB1. | I help co-workers who have been absent | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| OCB2. | I help co-workers who have heavy workloads | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| OCB3. | I assist my supervisor with his/her work (when not asked) | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| OCB4. | I take time to listen to co-workers problems and worries | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| OCB5. | I go out of the way to help new employees | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| OCB6. | I take a personal interest in co-workers | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| OCB7. | I pass along information to co-workers | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| OCB8. | My attendance at work is above the norm | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| OCB9. | I give advance notice when unable to come to work | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| OCB10. | I take undeserved work breaks | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| OCB11. | I spend great deal of time in personal phone conversations | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| OCB12. | I complain about insignificant things at work | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| OCB13. | I conserve and protect organizational property | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| OCB14. | I adhere to informal rules devised to maintain order | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

**Part D: Demographic Information**

**Information:** Please read and tick as appropriate in the provided boxes your exact assessment of the following demographic information:

1. **Gender**
   Male
   Female

2. **Age**

   21-30

   31-40

   41-50

   51 Above

3. **Position of Responsibility**

   Supervisory

   Non-supervisory

4. **Work Experience**

   10 years and above

   5 -10 years

   1-5 years

   Less than 1 year

5. **Highest Educational Qualification**

   Doctorate Degree

   Masters Degree

   First Degree

   Diploma/NCE/ etc.

   Secondary School
   Certificate

   Others (Specify)

**6. Name of your Organization**

……………………………………………………………………………………

Thank you so much for your cooperation.

**Abdu Ja'afaru Bambale**

**APPENDIX B: SUMMARY OF REVIEWED LITERATURES**

| S/N | Author | Country | Industry | Variables | Methods | Major Findings | Future research |
|---|---|---|---|---|---|---|---|
| 1 | Garg, P. & Rastogi, R. (2006). | India | Public & Private Schools | Organizational climate and organizational citizenship behaviors (OCBs) | T-test | Because of climate profile, teachers working in public schools demonstrate higher degree of OCB in comparison to private schools. | N/A |
| 2 | Dimitriades, Z. S. (2007). | Greek | Service industries | Service climate and customer-organizational citizenship behaviors (OCBs) | Hierarchical regression analyses | Results showed significant relations existing between service climate and customer-OCB | Extend to consider other antecedents of CO-OCBs for e.g, customer-oriented service orientation (COSE), psychological empowerment, service encounter practices, service quality, loyalty, customer satisfaction, and commitment. |
| 3 | Yu, and Chu (2007). | Taiwan | Virtual environments | Leader–member exchange, positive affection, & organizational citizenship behaviors (OCBs) | Path analysis | Quality leader–member exchange relationships, and positive affection motivated performance OCB. | N/A |

| S/N | Author | Country | Industry | Variables | Methods | Major Findings | Future research |
|-----|--------|---------|----------|-----------|---------|----------------|-----------------|
| 4 | Cohen (2006) | Israel | Schools | multiple commitments, ethnicity, cultural dimensions, and organizational citizenship behaviors (OCBs) | ANOVA | Substantial differences exist between the Arabs and Jews in how multiple commitments, ethnicity/ cultural values significantly interact to affect their OCB. | Because cross-cultural aspects most foten exisit, future studies should routinely identify the ethnic and racial attributes of samples. |
| 5 | Kagaari and Munene (2007) | Uganda | University | Competencies, and organizational citizenship behaviors (OCBs) | Regressions analysis | The study revealed that those lecturers who have the relevant competencies do exhibit discretionary behaviors at work. The model could be useful in deriving employee competencies and critical outputs. | Replicate by using different competency profiling techniques. |
| 6 | Williams, Rondeau, and Francescutti (2007) | Canadia | Hospital | culture, job satisfaction, patient commitment, and extra-role performance | LISREL 8 SEM | Significant direct relationship between entrepreneurial culture, and extra-role behavior was found. | To relicate the study using larger sample. |

| S/N | Author | Country | Industry | Variables | Methods | Major Findings | Future research |
|---|---|---|---|---|---|---|---|
| 7 | Chattopadh yay (1999) | US | Manufac-turing | Employees' attraction, employees' trust, organization sel-esteem, demographic dissimilarity, and OCB. | Regressions analysis | Race dissimilarity negatively influence organization based self-esteem, peer relations and altruism for white employees in minority-dominated group but not for minority employees in white-dominated groups. | To relicate the study using larger sample. |
| 8 | Coyle-Shapiro (2002) | UK | public sector | perceived employer obligations, helping advocacy, functional participation, & perceived, employer inducements | Regressions analysis | perceived employer obligations have significantly and positively affected helping, advocacy and functional participation dimensions of OCB beyond that affected by perceived employer inducements | Consider private sector |

| S/N | Author | Country | Industry | Variables | Methods | Major Findings | Future research |
|---|---|---|---|---|---|---|---|
| 9 | Peng, & Chiu (2010) | Taiwan | Schools | Supervisor feedback environment, OCB person-organization fit, organizational commitment, role stressors, and job burnout. | LISREL 8 | Findings have revealed that supervisor feedback environment affects subordinates' OCB indirectly through person-organization fit, organizational commitment, role stressors, and job burnout. | To use experimental designs or time-series designs for clarifying the causal relationships among the studied variables. |
| 10 | Huang, & Liu, (2011). | Taiwan | Hospital | External environment, organizational citizenship behaviors, self-serving motivation, and job satisfaction | Regressions analysis | Results demonstrate that external environment has significant negative effect on organizational citizenship behaviors, and that self-serving motivation and job satisfaction have positive effects on organizational citizenship behaviors (OCBs). The mediating effect of job satisfaction is also established. | N/A |

| S/N | Author | Country | Industry | Variables | Methods | Major Findings | Future research |
|---|---|---|---|---|---|---|---|
| 11 | Stamper, C. L. & Van Dyne, L. 2001 | US | Service industries | Preferred work status, work status, OCB | Hierarchical regression analyses | Preferred work status moderated the relationship between work status and both the two forms of OCB (helping, and voice), which indicates that part time workers perform less OCBs. | To investigate possible mediation between work status and OCB |
| 12 | Farrell, and Finkelstein (2007) | US | Students | Civic virtue, helping, employee gender, supervisor attribution | ANOVA, MANOVA | women are viewed as more likely to take part in OCB-helping dimension and men are viewed as more likely to take part in OCB-civic virtue dimension | To separate the effects of gendered expectations for certain behaviors and the effects of attributions for those behaviors. |
| 13 | Kidder (2002) | US | Hospital | Gender, civic virtue, and altruism. | Hierarchical regression analyses | Influence of gender roles is stronger for male-typed behaviors, such as civic virtue, than for female-typed behaviors, such as altruism. | Include gender as an explanatory variable. |
| 14 | Emmerik, and Jawahar (2005) | Netherlands | Banking | OCBs, volunteering, and helping kin | Regressions analysis | women engage in helping their kin to a greater extent than men; women spend more than three times as many hours helping kin than men. | To determine if their findings hold for blue-collar employees. |

| S/N | Author | Country | Industry | Variables | Methods | Major Findings | Future research |
|-----|--------|---------|----------|-----------|---------|----------------|-----------------|
| 15 | Van Dyne, Kossek, & Lobel (2007) | US | N/A | Collaborative time management, redefinition of work contributions, proactive availability, strategic self-presentation, & group-level OCB | Qualitative | Facilitating work practices including collaborative time management, redefinition of work contributions, proactive availability and strategic self-presentation significantly affect group-level organizational citizenship behavior (OCB). | To replicate using empirical technique, and extend study by considering factors such as voluntary turnover, continuity of group membership as possible outcomes of facilitating processes. |
| 16 | NG, Y. K., & Van Dyne, L. (2005) | US | Students | Group cohesion, cooperative norms, task conflict, and group helping | Ordinary Least Squares Regressions | Results reveal that employees in groups with high cohesion, strong cooperative norms, and low task conflict are described by their peers as exhibiting greater helping behavior (OCB). | Extend the nomological network of OCB in work groups particularly on cross-level relationships. |

| S/N | Author | Country | Industry | Variables | Methods | Major Findings | Future research |
|-----|--------|---------|----------|-----------|---------|----------------|-----------------|
| 17 | Paré, & Tremblay (2007) | Canada | Information Technology | Recognition, empowerment, organizational rewards, competence development, information-sharing practices, and OCB | SEM | Key findings reveals that citizenship behaviors significantly reduce turnover intentions of highly skilled professionals. | Extend study using multiple sources, including employee self-reports, coworkers, and supervisors and company records, using multiple methods, such as structured interviews, questionnaires, and observation. |
| 18 | Williams, Rondeau, and Francescutti (2007) | Canada | Hospital | HR, Bureaucratic, Rational, Entrepreneurial, culture, & OCB. | LISREL 8 SEM | Entrepreneurial culture strongly and positively related to extra-role behaviour. | N/A |
| 19 | Bowler, Halbeleben, Stodnick, Seevers, and Little (2009) | US | Manufacturing | Communication network centrality, impression management, organizational concern, pro-social motive, interpersonal citizenship behavior | Hierarchical regression analyses | Influence of some motive such as pro-social motive and concern for one's organization motivate individuals to exhibit interpersonal citizen behavior regardless of his/her position or power in the organization | Explain the causal linkages of variables used in the current model. |

| S/N | Author | Country | Industry | Variables | Methods | Major Findings | Future research |
|-----|--------|---------|----------|-----------|---------|----------------|-----------------|
| 20 | King, C., & Grace, D. (2012) | Australia | Service industry | Organizational socialization, relationship orientation and employee receptiveness employee brand citizenship behaviors | Partial Least Squares (PLS) | significant positive relationship between organizational socialization and brand citizenship behaviors. Additionally, employee receptiveness found to have a strong significant positive effect on both employee brand citizenship behaviors (BCB). | Extend study to find effects of personality, values, motivation, emotional intelligence, affective reactions and behavioural responses to employer brands on employee brand citizenship behaviors (BCB). |
| 21 | Landry, and Vandenberghe (2012) | Canada | Health care sector | employee commitment to the supervisor, supervisor commitment to the employee, & employee OCB. | Hierarchical regression analyses | Employee affective commitment and supervisor normative commitment interacted significantly to predict both employee in-role, and OCB performance. | Investigate mentoring as a potential mediating mechanism. |

| S/N | Author | Country | Industry | Variables | Methods | Major Findings | Future research |
|-----|--------|---------|----------|-----------|---------|----------------|-----------------|
| 22 | Kane, Magnusen, and Perrewe´ (2012) | US | Students | Organizational, and community identification, organizational citizenship behaviour, and pro-social behavior | SEM | Organizational identification produces OCB, and Community identification produces pro-social behavior. Community identification has fully mediated the relationship between organizational identification and pro-social behavior. | Future research should explore potential moderators of the relationship between identification, and extra-role behavior. |
| 23 | Peng, and Zhao, (2012) | China | Service industry | Compulsory citizenship behavior, organizational citizenship behavior (OCB), psychological contract, Chinese traditionality | | Compulsory citizenship behavior has negative a impact on the performance of organizational citizenship behavior (OCB). Chinese traditionality is proved to a moderator in the model. | More mediators should be explored that underline the relationship between CCB and job satisfaction |

| S/N | Author | Country | Industry | Variables | Methods | Major Findings | Future research |
|-----|--------|---------|----------|-----------|---------|----------------|-----------------|
| 24 | Chou, S. Y., & Pearson, J. M. (2012). | US | Information Technology | Job satisfaction, ob stress, trust commitment, and OCB | Partial Least Squares (PLS) | reconfirmed the positive significant effect of job satisfaction on OCB when they investigated the relationships of job stress, trust, commitment, job satisfaction, and OCB | Job security or job status could have an important effect on an IT professional's perceived valence of job satisfaction, and OCB. |
| 25 | Sulea, Virga, Maricutoiu, Schaufeli, Dumitru, and Sava (2012) | Romania | Manufacturing | perceived organizational, interpersonal conflict, work engagement, conscientiousnes s, organizational citizenship behaviors (OCB). | SEM AMOS | Found that perceived organizational, interpersonal conflict at work, and conscientiousness have both direct and indirect relation with organizational citizenship behaviors (OCB) through the work engagement | To conduct similar longitudinal study and also consider observer, supervisor, or colleague ratings of POS, WE, OCBs etc. |
| 26 | Liang (2012) | Taiwan | Hotel | work values, burnout, and organizational citizenship behaviors | Hierarchical regression analyses | Work values and burnout are significant factors that influence OCBs. Moreover, burnout significantly moderates the relationships between work values and OCBs. | To test the model in different cultures for rigorous, and better understanding of the causal relationship among variables such as work values, burnout, and OCBs. |

| S/N | Author | Country | Industry | Variables | Methods | Major Findings | Future research |
|-----|--------|---------|----------|-----------|---------|----------------|-----------------|
| 27 | Jung, & Yoon, (2012) | Korea | Hotel | Emotional intelligence, and organizational citizen behaviors | SEM | Results have shown that self-emotion appraisal, and use of emotion has significant influence on organizational citizen behaviors (OCBs). | To consider more variables of individual differences that may affect emotional intelligence at the individual level. |
| 28 | Yen, and Teng (2013) | Taiwan | Hotel | Centralization, OCB, DWB and procedural justice. | Hierarchical regression analysis | Results demonstrate that centralization is significantly and positively related to OCB. Additionally, procedural justice has been found to partially mediate the relationship between centralization and OCB. | Future studies to use many industries, and conduct more in-depth analysis. Secondly, longitudinal design should be used to address the causal status of the variables examined in previous research. |
| 29 | Zhang, Walumbwa, Aryee, and Chen (2013) | China | Telecommunication | Uncertainty, emotional exhaustion, ethical leadership, employee organizational citizenship behavior (OCB), and work withdrawal behavior | SEM LISREL | Results demonstrate that uncertainty and emotional exhaustion fully mediate the relationship between ethical leadership, and organizational citizenship behavior (OCB). | Because no direct relationship between uncertainty and OCB was investigated, future research may investigate how, and why uncertainty relates to OCB. |

| S/N | Author | Country | Industry | Variables | Methods | Major Findings | Future research |
|-----|--------|---------|----------|-----------|---------|----------------|-----------------|
| 30 | Kappagoda, U. W. M. R. S., & Kulathunga, S. D. K. (2012). | Sri Lankan | Education sector | Agreeableness, extraversion, conscientiousness, openness to experience, neuroticism and OCB. | Regressions analysis | Agreeableness, extraversion, conscientiousness, and openness to experience are significantly and positively correlated with OCB. In addition, neuroticism is shown to have significant negative correlation with OCB. | To explore potential moderators for personality-OCB relationship. To replicate the study using sample from other service organizations or different organizations. |
| 31 | Bharathidasan, S. S., & Jawahar, P. D. (2013). | India | University | Job satisfaction, and OCB. | Regressions analysis | Job satisfaction significantly, and positively relates with OCB. | Further study to involve other faculty members in arts, engineering, science. Future studies may also test the effects of gender, departments, designation in the institution,teaching, qualification, and experience. |
| 32 | Chou, Chou, Jiang, and Klein (2013) | Taiwan | Taiwan Tax Authority | Organizational justice, OCB, and job commitment. | Partial Least Squares (PLS) | Significant, and positive influence of organizational justice on OCB through job commitment among 298 Taiwan Tax Authority respondents | N/A |

| S/N | Author | Country | Industry | Variables | Methods | Major Findings | Future research |
|-----|--------|---------|----------|-----------|---------|----------------|-----------------|
| 33 | Zheng, Zhang, and Li's (2012) | China | Variety of companies | Performance appraisal process, OCB, perceived rating-reward linkage, and affective commitment. | SEM | Direct relationship between appraisal process and OCB is significant and positive, and is moderated by perceived rating-reward linkage, and is partially mediated by affective commitment. | Future research should explore other mechanisms linking Performance appraisal process performance appraisal process process to employee OCB. |
| 34 | Sun, Chow, Chiu, and Pan (2013). | China | Manufacturing | LMX, OCB, outcome favorability, and procedural justice climate. | Hierarchical linear modelling (HLM). | LMX has significant positive effect on OCB. Outcome favorability partially mediates LMX-OCB relationship. Procedural justice climate moderates LMX-OCB relationship. | Future research to theorize and investigate the moderating effect of cultural factors in the current relationships. |
| 35 | Balliet, and Ferris (2013) | Singapore | Variety of occupations | Ostracism, pro-social behaviour, and future orientation | Hierarchical regression analysis | Individuals who are less oriented towards future outcomes engage in less helping behaviors toward people who have ostracized them during past interactions. | In order to avoid any possible order effects, future research may consider empirical measurements of future orientation rather than manipulated future orientation used in the current study. |

| S/N | Author | Country | Industry | Variables | Methods | Major Findings | Future research |
|---|---|---|---|---|---|---|---|
| 36 | Hunter, Neuberta, Perry, Witt, Penney, & Weinberger (2013) | United States | Retail stores | Agreeableness, extraversion, servant leadership, service climate, helping behavior, and turnover intentions | Regressions analysis | The significant impact of unit-level servant leadership on helping behavior is mediated by service climate. | To examine servant leadership practices using additional demographic and relationship data different industries that place different emphases on servant leadership values. |
| 37 | Ehrhart (2004) | United States | Grocery departmental stores | Servant leadership, procedural justice climate, and OCB. | Structural Equation Modelling (SEM). | 1) significant positive effcet of servant leadership on unit-level OCB; (2) indirect significant relationship between servant leadership and unit-level OCB through the mediating effect of procedural justice climate. | To dicover additional antecedents of unit level-OCB such as group cohesiveness, and collective trust, task interdependence, affective tone - positive affectivity, or negavitive affectivity. |
| 38 | Vondey (2010) | United States | Variety of organizations. | Servant leadership, person-organization fit, organizational identification, and OCB. | Multiple regression analysis | (1) direct but partial effect of servant leadership on employee OCB; (2) positive moderating effects of person-organization fit and organizational identification on the relationship between servant leadership and OCB. | (1) To fully apply Liden *et al.*'s 28-item servant leadership instrument; (2) Use group-level behaviors, i.e. the interaction of subordinates with each other and the interaction of subordinates as a group with the leader. |

| S/N | Author | Country | Industry | Variables | Methods | Major Findings | Future research |
|-----|--------|---------|----------|-----------|---------|----------------|-----------------|
| 39 | Walumbwa, F. O., Hartnell, C. A., & Oke, A. (2010) | Kenya | Multinational companies | Servant leadership, procedural justice climate, service climate, employee attitudes, and organizational citizenship behavior | Hierarchical Linear Modeling | Commitment to the supervisor, self-efficacy, procedural justice climate, and service climate partially mediate the relationship between servant leadership, and OCB. | To undertake servant leadership and OCB integrative studies in different work settings, and cultural contexts using different mediators. |
| 40 | Neubert, M. J., Kacmar, K. M., Carlson, D. S., Chonko, L. B. & Roberts, J. A. (2008) | United States | Variety of occupations | Initiating structure, servant leadership, regulatory focus, and OCB. | SEM LISREL | Initiating structure, and servant leadership significantly influence OCB through regulatory focus. | To explore more leadership styles with respect to regulatory focus theory (RFT). |
| 41 | Hu, J., & Liden, R. C. (2011) | China | Banking | Goal, process clarity, team potency, and OCB | Structural Equation Modelling (SEM). | Servant leadership strongly moderates the relationships between between goal, process clarity and team potency as independent variables and team performance and team OCB as depenedent varibales. | To improve generalization of findings by conducting similar research in settings other than the banking industry. |

| S/N | Author | Country | Industry | Variables | Methods | Major Findings | Future research |
|-----|--------|---------|----------|-----------|---------|----------------|-----------------|
| 42 | Liden, Wayne, Zhao and Henderson (2008) | United States | Production and distribution company, & university students | Servant leadership, transformational leadership, LMX, community citizenship behaviors, in-role performance, and organizational commitment | Hierarchical linear modeling, & structural Equation Modelling (SEM). | (1) validated a 28-item servant leadership measuerment scale; (2) reinforced the significant relationship existing between servant leadership and OCB. | (1) To use larger samples in order to detect any group-level effects present in the study population; (2) To revalidate their findings in different contexts, and settings; (3) To construct a supervisor type of the servant leadership measuerment scale |
| 43 | Van Dyne, L., & Pierce, J. L. (2004). | United States | Variety of organiza-tions. | Organizational commitment, job satisfaction, self-esteem, psychological ownership, performance, and OCB | SEM LISREL | Psychological ownership for the organization OCB, and performance are significantly related. (2) Psychological ownership has increased variance in organization-based self-esteem and OCB in both the peer and supervisor ratings above the effects of job satisfaction and organizational commitment. | Future research should continue to explore the unique influence of psychological ownership for understanding employee attitude, and behavior in different work settings and contexts |

343

| S/N | Author | Country | Industry | Variables | Methods | Major Findings | Future research |
|---|---|---|---|---|---|---|---|
| 44 | Vandewalle, D., Van Dyne, L., & Kostova, T. (1995). | United States | Housing cooperative society | Psychological ownership, job satisfaction, organizational commitment, and OCB. | Regressions analysis | (1) Psychological ownership significantly and strongly predicts OCB. (2) psychological ownership is superior over satisfaction in predicting OCB. (3) significant mediated effect of organizational commitment on psychological ownership-OCB relationship. | (1) To investigate the antecedent of psychological ownership; (2) To conduct similar study in different work settings such as public sector, or for-profit organizations |
| 45 | Mayhew, M. G., Ashkanasy, N. M., Bramble, T. & Gardner, J. (2007). | United States | Accounting firm | Psychological ownership, helping, and voice extra-role behavior (OCB). | Regressions analysis | Psychological ownership does not have significant influence on helping or voice extra-role behavior (OCB). | To address individual factors that may influence the development of psychological ownership. |
| 46 | Güçel, C. & Begeç, S. (2012) | Turkey | University | Servant leadership and OCB | Regressions analysis | Vision and service dimensions of the servant leadership construct have positive significant effect on the sportsmanship and civic virtue dimensions of organizational citizenship behavior (OCB). | N/A |

| S/N | Author | Country | Industry | Variables | Methods | Major Findings | Future research |
|---|---|---|---|---|---|---|---|
| 47 | Avey, J. B., Avolio, B. C., Crossley, C. D., & Luthans, F. J. (2009) | United States | Manufac-turing | Psychological ownership, employee commitment, job satisfaction, intentions to stay, and workplace deviance | Structural Equation Modelling (SEM). | They developed a theory-driven multi-dimensional measure of psychological ownership. both types of organizational citizenship behaviors (individual and organizational) as well as workplace deviance (negative relationship) were related to promotive psychological ownership. | Future research to examine the relationship between preventive ownership that is considered the potentially more destructive forms of ownership processes such as organizational change; (2) Also future theory-building and research should explain link between psychological ownership and other related concepts such as responsibility or autonomy, and emerging positive organizational behavior resources such as psychological capital, and psychological well-being. |
| 48 | Kandlousi, N. A., Ali, A. J., & Abdollahi, A. (2010). | Iran | Manufac-turing | Organizational citizenship behavior, communication satisfaction, formal, and informal communication | Regressions analysis | Both formal, and informal communications strongly predict communication satisfaction, and in turn communication satisfaction significantly predict all dimensions of OCB. | Future research may consider qualitative studies that use focus groups and observations. |

| S/N | Author | Country | Industry | Variables | Methods | Major Findings | Future research |
|---|---|---|---|---|---|---|---|
| 49 | Lian, L. K., & Low Guan Tui, L. G. (2012). | Malaysia | Variety of organiza-tions. | Leadership styles,OCB, subordinates' competence and downward influence tactics. | Regressions analysis | Transformational leadership style has significant positive relationship with employee OCB, while the transactional leader style is negatively related to OCB. inspirational appeals and consultation tactics, as downward influence tactics, were found to mediate the relationship between transformational leadership and organizational citizenship behavior | To incorporate additional endogenous variables such as motivation, compliance and performance of subordinate in the current model that can be more indicative of organizational outcomes. |
| 50 | Al-sharafi, H., & Rajiani, I. (2013). | Yemen | Banking | Leadership practices, organizational commitment, and OCB | Regressions analysis | Leadership practices increase both organizational commitment, and OCB among employees. | N/A |
| 51 | Yunus, N. H. (2012). | Malaysia | Banking | OCB, emotional intelligence and leader-member exchange. | Regressions analysis | Emotion appraisal (OEA) and regulation of emotion (ROE) have a positive influence on altruism and civic virtue dimensions of OCB. | Future research should focus on testing the relationships between emotionaI intelligence (EI), and OCB across different settings, and cultures and industries. |

| S/N | Author | Country | Industry | Variables | Methods | Major Findings | Future research |
|---|---|---|---|---|---|---|---|
| 52 | Khan, S. K., Rashid, M. Z. A. (2012). | Malaysia | University | Organization culture, leadership style, organizational justice, organization commitment, and OCB. | Regressions analysis | Organization culture, leadership style, organizational justice, organization commitment seem to have significant impact on OCB. Organizational commitment mediated between organization culture, leadership style, organization justice, and OCB. | The study shaould be replicated usin a larger sample. |
| 53 | Chang, A., Chiang, H., & Han, T. (2012). | Taiwan | Hotel | Brand-centered HRM, brand psychological ownership, brand citizenship behaviors, and customer satisfaction | Regressions analysis | Brand psychological ownership positively affect the employee brand citizenship behaviors. Furthermore, employee brand psychological ownership partially mediates the relationship between brand-centered HRM and employee brand citizenship behaviors. | To investigate relationship between the research constructs and other organizational constructs, for e.g. person-brand fit, brand psychological ownership, brand commitment, and employee brand citizenship behaviors to obtain a more complete understanding of internal branding. |

| S/N | Author | Country | Industry | Variables | Methods | Major Findings | Future research |
|---|---|---|---|---|---|---|---|
| 54 | Chung, Y. W., & Moon, H. K. (2011). | Korea | Variety of organiza-tions. | Collectivistic orientation, psychological ownership, and constructive deviant behavior. | Regressions analysis | Psychological ownership increased the likelihood for employees to implement innovative work processes and reveal employees' wrongdoing in order to improve organizational effectiveness. | Third, psychological ownership should further be investigated with dysfunctional deviant behavior such as theft, workplace sabotage, and employee shirking. |
| 55 | Dierendonck, D., & Nuijten, I. (2011). | Netherlands and United Kingdom | Variety of organiza-tions. | Servant leadership significantly predicts follower OCB. | Regressions analysis | Development of new servant leadership scale. Also found significant relations between servant leadership and OCB. | More studies are needed to test the scale across different cultures, and settings. |

**APPENDIX C: PLS QUALITY INDICATORS**

**Appendix C.1: PLS Quality Criteria Overview**

| Constructs | AVE | Composite Reliability | R Square | Cronbachs Alpha |
|---|---|---|---|---|
| CS | 0.664622 | 0.886715 | | 0.836775 |
| CVC | 0.687425 | 0.897775 | | 0.850051 |
| EH | 0.594604 | 0.853629 | | 0.771135 |
| HSGS | 0.783849 | 0.915497 | | 0.859805 |
| OCBI | 0.790850 | 0.937040 | 0.047909 | 0.907598 |
| OCBO | 0.876054 | 0.954951 | 0.026859 | 0.929188 |
| PO | 0.801988 | 0.952662 | 0.150164 | 0.936626 |
| PSF | 0.810920 | 0.927824 | | 0.883706 |

**Appendix C.2: Latent Variable Correlations**

| | CS | CVC | EH | HSGS | OCBI | OCBO | PO | PSF |
|---|---|---|---|---|---|---|---|---|
| CS | 1.00000 | | | | | | | |
| CVC | 0.510571 | 1.000000 | | | | | | |
| EH | 0.293458 | 0.345377 | 1.000000 | | | | | |
| HSGS | 0.295675 | 0.406018 | 0.421788 | 1.000000 | | | | |
| OCBI | 0.152489 | 0.072593 | 0.295470 | 0.192824 | 1.000000 | | | |
| OCBO | 0.155509 | 0.103400 | 0.056472 | 0.135810 | 0.316759 | 1.000000 | | |
| PO | 0.158553 | 0.121745 | 0.310364 | 0.298439 | 0.218880 | 0.163887 | 1.000000 | |
| PSF | 0.163474 | 0.399648 | 0.424903 | 0.512854 | 0.261034 | 0.154424 | 0.282532 | 1.000000 |

**APPENDIX D: MEASUREMENT MODEL RESULTS**

## Cross Loadings (Appendix D)

| | CS | CVC | EH | HSGS | OCBI | OCBO | PO | PSF |
|---|---|---|---|---|---|---|---|---|
| **OCB10_1** | 0.130548 | 0.101974 | 0.064268 | 0.119152 | 0.293733 | 0.961894 | 0.140857 | 0.122979 |
| **OCB11** | 0.161055 | 0.135684 | 0.093116 | 0.187005 | 0.309009 | 0.925009 | 0.155827 | 0.161885 |
| **OCB3** | 0.263055 | 0.065036 | 0.325175 | 0.18082 | 0.807018 | 0.24893 | 0.213996 | 0.198926 |
| **OCB5** | 0.218431 | 0.048999 | 0.185982 | 0.153044 | 0.759322 | 0.292255 | 0.12955 | 0.022518 |
| **OCB6_1** | 0.225325 | 0.070462 | 0.260003 | 0.175934 | 0.986092 | 0.300988 | 0.208928 | 0.14103 |
| **OCB7** | 0.225325 | 0.070462 | 0.260003 | 0.175934 | 0.986092 | 0.300988 | 0.208928 | 0.14103 |
| **OCB8_1** | 0.140372 | 0.054431 | 0.003909 | 0.075904 | 0.285905 | 0.920829 | 0.161526 | 0.086791 |
| **PO1** | 0.245743 | 0.156179 | 0.255129 | 0.273458 | 0.128484 | 0.10506 | 0.828871 | 0.18102 |
| **PO3** | 0.261796 | 0.038311 | 0.285147 | 0.241589 | 0.225243 | 0.181892 | 0.8064 | 0.06534 |
| **PO4** | 0.212356 | 0.117332 | 0.22949 | 0.23766 | 0.155158 | 0.10474 | 0.877359 | 0.122979 |
| **PO5** | 0.269741 | 0.110272 | 0.298671 | 0.28331 | 0.203162 | 0.153903 | 0.977198 | 0.161885 |
| **PO7** | 0.266716 | 0.133568 | 0.306973 | 0.29585 | 0.244704 | 0.170615 | 0.975208 | 0.18055 |
| **SL1** | 0.298321 | 0.292936 | 0.783331 | 0.294942 | 0.263022 | 0.066931 | 0.205525 | 0.24439 |
| **SL10_1** | 0.827611 | 0.455359 | 0.290345 | 0.247537 | 0.115514 | 0.122134 | 0.162306 | 0.163621 |
| **SL11** | 0.878409 | 0.430587 | 0.254588 | 0.270692 | 0.129085 | 0.135213 | 0.12896 | 0.117754 |
| **SL12** | 0.84506 | 0.428161 | 0.189034 | 0.259999 | 0.116679 | 0.126998 | 0.114312 | 0.163517 |
| **SL16_1** | 0.198166 | 0.378099 | 0.375254 | 0.482824 | 0.263675 | 0.269566 | 0.172108 | 0.89645 |
| **SL17** | 0.093592 | 0.331302 | 0.368003 | 0.442648 | 0.248103 | 0.271217 | 0.155474 | 0.920955 |
| **SL18** | 0.15212 | 0.375924 | 0.413215 | 0.463456 | 0.18503 | 0.216606 | 0.078504 | 0.884629 |
| **SL24** | 0.253026 | 0.34043 | 0.37293 | 0.946383 | 0.16784 | 0.286512 | 0.12707 | 0.441623 |
| **SL25_1** | 0.214912 | 0.345969 | 0.328808 | 0.902652 | 0.141342 | 0.229551 | 0.110629 | 0.484705 |
| **SL26** | 0.310156 | 0.390013 | 0.410736 | 0.802172 | 0.198244 | 0.269161 | 0.120751 | 0.439589 |
| **SL2_1** | 0.273752 | 0.288648 | 0.82979 | 0.382469 | 0.215158 | 0.284139 | 0.020293 | 0.336426 |
| **SL3** | 0.14166 | 0.200656 | 0.76704 | 0.289581 | 0.248463 | 0.242215 | 0.045676 | 0.295792 |
| **SL4** | 0.246542 | 0.291183 | 0.69756 | 0.325768 | 0.192508 | 0.214213 | 0.050487 | 0.387234 |
| **SL5_1** | 0.385197 | 0.805124 | 0.330657 | 0.370384 | 0.006224 | 0.082869 | 0.112839 | 0.39074 |
| **SL6** | 0.442278 | 0.860948 | 0.269979 | 0.31602 | 0.059857 | 0.10562 | 0.090847 | 0.320194 |
| **SL7** | 0.394603 | 0.826977 | 0.229882 | 0.298656 | 0.032603 | 0.07815 | 0.046007 | 0.278018 |
| **SL8** | 0.45771 | 0.828544 | 0.31099 | 0.361131 | 0.114535 | 0.124935 | 0.089722 | 0.340366 |
| **SL9** | 0.722143 | 0.343042 | 0.227713 | 0.165304 | 0.189604 | 0.053715 | 0.198081 | 0.044112 |

**APPENDIX E: DIRECT AND INDIRECT EFFECTS**

**Direct and Indirect Effects (Mean, STDEV, T-Values)**

| Paths | Original Sample (O) | Sample Mean (M) | Standard Deviation (STDEV) | Standard Error (STERR) | T Statistics (|O/STERR|) |
|---|---|---|---|---|---|
| CS -> OCB-I | 0.019446 | 0.020889 | 0.016422 | 0.016422 | 1.184151 |
| CS -> OCB-O | 0.01456 | 0.01537 | 0.013012 | 0.013012 | 1.11901 |
| CS -> PO | 0.088842 | 0.089732 | 0.063196 | 0.063196 | 1.405809 |
| CVC -> OCB-I | -0.025243 | -0.021941 | 0.015545 | 0.015545 | 1.623895 |
| CVC -> OCB-O | -0.018901 | -0.015731 | 0.011714 | 0.011714 | 1.613507 |
| CVC -> PO | -0.115327 | -0.096375 | 0.061398 | 0.061398 | 1.878369 |
| EH -> OCB-I | 0.04216 | 0.0445 | 0.018376 | 0.018376 | 2.294369 |
| EH -> OCB-O | 0.031568 | 0.032177 | 0.015287 | 0.015287 | 2.06503 |
| EH -> PO | 0.192619 | 0.197812 | 0.063466 | 0.063466 | 3.034975 |
| HSGS -> OCB-I | 0.035235 | 0.034714 | 0.016546 | 0.016546 | 2.129483 |
| HSGS -> OCB-O | 0.026383 | 0.02485 | 0.012943 | 0.012943 | 2.038399 |
| HSGS -> PO | 0.16098 | 0.154805 | 0.06397 | 0.06397 | 2.5165 |
| PO -> OCB-I | 0.21888 | 0.22481 | 0.053186 | 0.053186 | 4.11538 |
| PO -> OCB-O | 0.163887 | 0.163256 | 0.053243 | 0.053243 | 3.078071 |
| PSF -> OCB-I | 0.032765 | 0.03343 | 0.017743 | 0.017743 | 1.846697 |
| PSF -> OCB-O | 0.024533 | 0.023987 | 0.01362 | 0.01362 | 1.801241 |
| PSF -> PO | 0.149695 | 0.146229 | 0.065032 | 0.065032 | 2.301874 |

**APPENDIX F: BOOTSTRAPPED MEDIATION RESULTS**

**Appendix F.1: Mediation Results for OCB-I Model**

| Bootstrapped Samples | a*b for CS Construct | a*b for CVC Construct | a*b for EH Construct | a*b for HSGS Construct | a*b for PSF Construct |
|---|---|---|---|---|---|
| Sample 0 | 0.019283915 | -0.010891883 | 0.02198805 | 0.03115182 | 0.022883198 |
| Sample 1 | 0.024817158 | -0.032603089 | 0.029848893 | 0.047621494 | 0.055666992 |
| Sample 2 | 0.032910255 | -0.026467156 | 0.041479915 | 0.040312726 | 0.045301104 |
| Sample 3 | 0.030457113 | -0.015009435 | 0.073574169 | 0.061966841 | 0.040305818 |
| Sample 4 | -0.002374793 | -0.036710967 | 0.037054886 | 0.048211965 | 0.043938932 |
| Sample 5 | -0.030914254 | -0.00419712 | 0.057571127 | 0.029264715 | 0.017083452 |
| Sample 6 | 0.014723926 | -0.019103791 | 0.042109979 | 0.02484466 | 0.030121874 |
| Sample 7 | -0.025629031 | 0.001555654 | 0.061144405 | 0.053612765 | 0.04581511 |
| Sample 8 | 0.017879975 | -0.003835255 | 0.048745203 | 0.037283666 | 0.044646579 |
| Sample 9 | 0.01984747 | -0.021572433 | 0.041058634 | 0.031040094 | 0.017603792 |
| Sample 10 | 0.026636903 | -0.058799407 | 0.053249541 | 0.054706467 | 0.029127863 |
| Sample 11 | 0.066898174 | -0.037782777 | 0.036146324 | 0.061134499 | 0.018643063 |
| Sample 12 | 0.011606821 | -0.026778698 | 0.042085471 | 0.045204409 | 0.027172254 |
| Sample 13 | 0.056741999 | -0.063435112 | 0.055101996 | 0.021764891 | 0.065698061 |
| Sample 14 | 0.004169042 | -0.015195535 | 0.037160836 | 0.056775643 | 0.014782059 |
| Sample 15 | 0.019577304 | -0.02396672 | 0.021411241 | 0.038832035 | 0.016809022 |
| Sample 16 | 0.011778341 | -0.019282919 | 0.030119181 | 0.033017564 | 0.019998982 |
| Sample 17 | 0.038683333 | -0.034647543 | 0.084238461 | 0.000610238 | 0.063431617 |
| Sample 18 | 0.000947269 | -0.018966921 | 0.03583606 | 0.024027593 | 0.013857175 |
| Sample 19 | 0.013991761 | -0.006127057 | 0.010603794 | 0.029049238 | 0.022041769 |
| Sample 20 | 0.012734389 | -0.010542814 | 0.002675853 | 0.036032756 | 0.026098962 |
| Sample 21 | 0.024740944 | -0.032339648 | 0.041807485 | 0.002900504 | 0.063419813 |
| Sample 22 | -0.00690695 | -0.016840676 | 0.088268982 | 0.033383942 | 0.040517561 |
| Sample 23 | -0.007620778 | -0.059805355 | 0.062262975 | 0.039288892 | 0.050397451 |
| Sample 24 | 0.010512477 | -0.033271363 | 0.044768352 | 0.03038093 | 0.029365028 |
| Sample 25 | 0.014161906 | -0.003394766 | 0.018975858 | 0.022092719 | 0.000856947 |
| Sample 26 | 0.011805782 | -0.024017503 | 0.028788908 | 0.048497067 | 0.03179132 |
| Sample 27 | -0.000147682 | -0.004444525 | 0.053707079 | 0.02176985 | 0.032900732 |
| Sample 28 | 0.009503565 | -0.015398929 | 0.054201865 | 0.033208304 | 0.0269425 |
| Sample 29 | 0.012778351 | 0.004041408 | 0.049006197 | 0.003782929 | 0.01908429 |

| Bootstrapped Samples | a*b for CS Construct | a*b for CVC Construct | a*b for EH Construct | a*b for HSGS Construct | a*b for PSF Construct |
|---|---|---|---|---|---|
| Sample 30 | 0.028485468 | -0.021353851 | 0.052617073 | 0.021228025 | 0.022109368 |
| Sample 31 | 0.005844604 | -0.021660719 | 0.057695882 | 0.053921071 | 0.038103107 |
| Sample 32 | 0.014948457 | -0.017088506 | 0.067346003 | 0.034478795 | 0.038215842 |
| Sample 33 | 0.035132974 | -0.015814514 | 0.054834873 | 0.023890819 | 0.048545399 |
| Sample 34 | 0.009392816 | -0.025302636 | 0.034259303 | 0.039156933 | 0.035738949 |
| Sample 35 | 0.057257947 | -0.054894784 | 0.06959515 | 0.022997307 | 0.031957924 |
| Sample 36 | 0.010360732 | -0.012617215 | 0.008228502 | 0.0625616 | 0.003226059 |
| Sample 37 | 0.021813194 | -0.017248526 | 0.022098749 | 0.05346948 | 0.041877126 |
| Sample 38 | 0.016461374 | -0.034113406 | 0.060622622 | 0.0112733 | 0.042733491 |
| Sample 39 | 0.012190188 | -0.005073474 | 0.044863094 | 0.018371186 | 0.034676369 |
| Sample 40 | 0.008092225 | -0.023936078 | 0.077203145 | 0.059699728 | 0.044628937 |
| Sample 41 | 0.027027942 | -0.037315086 | 0.068421242 | 0.044238116 | 0.034707531 |
| Sample 42 | 0.017757171 | -0.021120518 | 0.039695457 | 0.031370983 | 0.030109152 |
| Sample 43 | 0.017973964 | -0.037748231 | 0.044317183 | 0.044644003 | 0.033067445 |
| Sample 44 | 0.0207501 | -0.028782717 | 0.026734368 | 0.057369307 | 0.018935595 |
| Sample 45 | 0.00536381 | -0.014009554 | 0.030060286 | 0.051485406 | 0.053884829 |
| Sample 46 | 0.014350604 | -0.031207947 | 0.026230827 | 0.029882667 | 0.0312361 |
| Sample 47 | 0.006094368 | -0.010922896 | 0.031624116 | 0.034073181 | 0.009144342 |
| Sample 48 | 0.015972144 | -0.027337975 | 0.044969204 | 0.038834685 | 0.007831922 |
| Sample 49 | 0.016538638 | -0.019186491 | 0.042838859 | 0.031483754 | 0.002563209 |
| Sample 50 | 0.008381038 | -0.012383413 | 0.048497914 | 0.033289193 | 0.052492005 |
| Sample 51 | 0.012569514 | -0.020417771 | 0.035892731 | 0.02106813 | 0.011190619 |
| Sample 52 | 0.008367242 | -0.035752783 | 0.076599365 | 0.036963772 | 0.021438778 |
| Sample 53 | 0.017058008 | -0.034159397 | 0.066754104 | 0.019398172 | 0.054611923 |
| Sample 54 | 0.021673627 | -0.023134754 | 0.039098754 | 0.013082601 | 0.046411371 |
| Sample 55 | 0.014906195 | -0.036216081 | 0.088315171 | 0.067687064 | 0.014316749 |
| Sample 56 | 0.02547556 | -0.028302279 | 0.058956674 | 0.038989408 | 0.034308728 |
| Sample 57 | 0.004292268 | -0.007806124 | 0.02529643 | 0.00997637 | 0.017170432 |
| Sample 58 | 0.032204903 | -0.033956053 | 0.098468355 | 0.018755303 | 0.029957348 |
| Sample 59 | -0.01583789 | 0.015765293 | 0.041511385 | 0.030259441 | 0.025488125 |
| Sample 60 | 0.021869989 | -0.025039697 | 0.075366421 | 0.039838438 | 0.013578937 |

| Bootstrapped Samples | a*b for CS Construct | a*b for CVC Construct | a*b for EH Construct | a*b for HSGS Construct | a*b for PSF Construct |
|---|---|---|---|---|---|
| Sample 61 | 0.019284903 | -0.019082679 | 0.043916677 | 0.028465128 | 0.029007295 |
| Sample 62 | 0.008730873 | -0.001789038 | 0.060391347 | 0.044873306 | -0.001626119 |
| Sample 63 | 0.008838256 | -0.015188835 | 0.038534582 | 0.057468937 | 0.033050488 |
| Sample 64 | 0.002753114 | -0.002262897 | 0.023869296 | 0.012776875 | 0.01499093 |
| Sample 65 | 0.046830728 | -0.015117817 | 0.033644536 | 0.017571718 | 0.061426034 |
| Sample 66 | 0.046496187 | -0.048277761 | 0.088935155 | 0.015901496 | 0.057520443 |
| Sample 67 | 0.009560095 | -0.01867165 | 0.045267704 | 0.059912738 | 0.027308344 |
| Sample 68 | 0.006825472 | -0.010612365 | 0.024058774 | 0.029766627 | 0.015663458 |
| Sample 69 | 0.020009439 | -0.048875361 | 0.043116488 | 0.057736268 | 0.025983753 |
| Sample 70 | 0.024871899 | -0.023728287 | 0.048415128 | 0.019572277 | 0.032832973 |
| Sample 71 | 0.034284307 | -0.029420216 | 0.054410452 | 0.012114015 | 0.037719669 |
| Sample 72 | 0.010859487 | -0.019218102 | 0.044742003 | 0.062181798 | 0.033321491 |
| Sample 73 | 0.025135835 | -0.001140598 | 0.025066094 | 0.003007114 | 0.036881023 |
| Sample 74 | 0.029405805 | -0.014673068 | 0.034230431 | 0.027852878 | 0.050529039 |
| Sample 75 | 0.035046482 | -0.021671989 | 0.046771689 | 0.052087628 | 0.028139256 |
| Sample 76 | -0.002849525 | -0.007465828 | 0.045721515 | 0.055369959 | -0.00550808 |
| Sample 77 | 0.029813402 | -0.048143425 | 0.072710106 | 0.061357658 | 0.033962147 |
| Sample 78 | 0.01185314 | -0.024040008 | 0.032081779 | 0.024509879 | 0.02218563 |
| Sample 79 | 0.03314964 | -0.025256033 | 0.019072879 | 0.017078296 | 0.037397412 |
| Sample 80 | 0.01589783 | -0.016974297 | 0.027917432 | 0.02965872 | 0.028852685 |
| Sample 81 | 0.023115704 | -0.015517561 | 0.035443782 | 0.03042161 | 0.053487081 |
| Sample 82 | 0.043813724 | -0.075102176 | 0.06094777 | 0.041384745 | 0.037457584 |
| Sample 83 | 0.009733363 | 0.005014997 | 0.012454634 | 0.063182081 | 0.014465691 |
| Sample 84 | 0.002016076 | -0.015864044 | 0.024306852 | 0.030628371 | 0.026712784 |
| Sample 85 | 0.034805769 | -0.065549948 | 0.094042104 | 0.046943812 | 0.073061251 |
| Sample 86 | 0.014824478 | -0.015077552 | 0.032488942 | 0.020415611 | 0.017905844 |
| Sample 87 | 0.010986409 | -0.011427711 | 0.014906145 | 0.026076674 | 0.007895314 |
| Sample 88 | 0.018412661 | -0.047433061 | 0.045176646 | 0.026269819 | 0.02335418 |
| Sample 89 | 0.018528853 | -0.011265303 | 0.052641072 | 0.020519186 | 0.019738609 |
| Sample 90 | 0.008641527 | -0.028915488 | 0.055306636 | 0.033247458 | 0.050831595 |
| Sample 91 | 0.011758811 | 0.001084151 | 0.02944387 | 0.021110282 | 0.021197062 |

| Bootstrapped Samples | a*b for CS Construct | a*b for CVC Construct | a*b for EH Construct | a*b for HSGS Construct | a*b for PSF Construct |
|---|---|---|---|---|---|
| Sample 92 | 0.02982703 | -0.038607403 | 0.066052811 | 0.066727295 | 0.039145923 |
| Sample 93 | 0.026660479 | 0.002349068 | 0.0494207 | 0.00995006 | -0.00444658 |
| Sample 94 | 0.011533152 | -0.000672448 | 0.029363992 | 0.015941075 | 0.017154462 |
| Sample 95 | -0.003027352 | 0.004506782 | 0.030748538 | 0.048133104 | 0.02211263 |
| Sample 96 | 0.058603554 | -0.035307665 | 0.032623881 | 0.028875991 | 0.038469867 |
| Sample 97 | 0.010605223 | -0.007411052 | 0.010883996 | 0.015861482 | 0.017302078 |
| Sample 98 | 0.016599173 | -0.013503534 | 0.042918363 | 0.031711612 | 0.015760668 |
| Sample 99 | 0.047880426 | -0.062032003 | 0.067812591 | 0.034977614 | 0.061865335 |
| Sample 100 | 0.023123138 | -0.01033142 | 0.015866552 | 0.045363512 | 0.016211418 |
| Sample 101 | 0.009946075 | -0.018056502 | 0.026079332 | 0.053810457 | 0.000821823 |
| Sample 102 | 0.011055931 | -0.002304176 | 0.003523788 | 0.064739595 | 0.001248945 |
| Sample 103 | 0.00122865 | -0.009252759 | 0.041711736 | 0.022969189 | 0.012896112 |
| Sample 104 | 0.006775659 | -0.002182972 | 0.020035643 | 0.036865854 | 0.036780247 |
| Sample 105 | 0.056903795 | -0.042628146 | 0.017711407 | 0.054732556 | 0.04170176 |
| Sample 106 | 0.034674818 | -0.031330785 | 0.065453505 | 0.028515636 | 0.038182834 |
| Sample 107 | 0.018173306 | -0.025723451 | 0.045501337 | 0.042629195 | 0.027248732 |
| Sample 108 | 0.038333892 | -0.034024377 | 0.037767124 | 0.043948916 | 0.047907252 |
| Sample 109 | 0.019959816 | -0.013588294 | 0.056653239 | 0.032800608 | 0.032323794 |
| Sample 110 | 0.020143503 | -0.011710365 | 0.023556349 | 0.037512918 | 0.026705095 |
| Sample 111 | 0.006111542 | -0.026993299 | 0.060469563 | 0.058135086 | 0.041036438 |
| Sample 112 | -0.042505972 | -0.024675585 | 0.071075933 | 0.020754749 | 0.074857618 |
| Sample 113 | 0.02859623 | -0.016067151 | 0.04071784 | 0.051293896 | 0.014644611 |
| Sample 114 | 0.004697202 | -0.015752407 | 0.024854366 | 0.014533422 | 0.025010444 |
| Sample 115 | 0.029450344 | -0.025733418 | 0.059151044 | 0.065611123 | 0.044796643 |
| Sample 116 | 0.046388149 | -0.040241239 | 0.024527831 | 0.017675553 | 0.041978538 |
| Sample 117 | 0.039652207 | -0.020237097 | 0.038344605 | 0.043155239 | 0.028560235 |
| Sample 118 | 0.018728446 | -0.01255126 | 0.017217874 | 0.017142693 | 0.032961633 |
| Sample 119 | 0.022372014 | -0.031598265 | 0.038084375 | 0.044582297 | 0.065457668 |
| Sample 120 | 0.032694041 | -0.043964345 | 0.08271697 | 0.018970775 | 0.058968697 |
| Sample 121 | 0.025933633 | -0.027805828 | 0.054777458 | 0.041051197 | 0.024444692 |
| Sample 122 | 0.003613488 | 0.003890594 | 0.019072375 | 0.017618109 | 0.015902786 |

| Bootstrapped Samples | a*b for CS Construct | a*b for CVC Construct | a*b for EH Construct | a*b for HSGS Construct | a*b for PSF Construct |
|---|---|---|---|---|---|
| Sample 123 | 0.056087149 | -0.027046123 | 0.061619035 | 0.031174392 | 0.031233576 |
| Sample 124 | 0.018929043 | -0.013294374 | 0.019959624 | 0.017675443 | 0.020409929 |
| Sample 125 | 0.006460219 | -0.002855588 | 0.028945247 | 0.03261781 | 0.028422041 |
| Sample 126 | 0.02041071 | -0.024868125 | 0.031709133 | 0.039687116 | 0.017565604 |
| Sample 127 | 0.033866227 | -0.037077217 | 0.040439988 | 0.022891952 | 0.033056537 |
| Sample 128 | 0.021674335 | -0.01819632 | 0.046136892 | 0.063895156 | 0.026325209 |
| Sample 129 | 0.005873954 | -0.016449514 | 0.047167628 | 0.033536983 | 0.044238214 |
| Sample 130 | 0.024359703 | -0.032503808 | 0.044598325 | 0.005060145 | 0.060204059 |
| Sample 131 | 0.012107087 | -0.012333856 | 0.040738378 | 0.052886262 | 0.045076505 |
| Sample 132 | 0.049304073 | -0.048575612 | 0.07288205 | 0.070578772 | 0.036308467 |
| Sample 133 | 0.030306757 | -0.010438708 | 0.028428774 | 0.024861567 | 0.035788514 |
| Sample 134 | 0.034752405 | -0.025770948 | 0.018830521 | 0.047091407 | 0.040149657 |
| Sample 135 | 0.041073226 | -0.035236066 | 0.064103348 | 0.012358311 | 0.033065667 |
| Sample 136 | 0.040192957 | -0.037193609 | 0.047321335 | 0.02303481 | 0.046525411 |
| Sample 137 | 0.025610762 | -0.02366642 | 0.046758177 | 0.01131446 | 0.01388103 |
| Sample 138 | 0.02402157 | -0.035781958 | 0.064071383 | 0.025217975 | 0.061355866 |
| Sample 139 | 0.016998748 | -0.024677503 | 0.031873142 | 0.059058782 | 0.070616022 |
| Sample 140 | 0.019924587 | -0.02746203 | 0.044538392 | 0.076488906 | 0.025157415 |
| Sample 141 | 0.087149538 | -0.048409599 | 0.074609952 | 0.057195806 | 0.072836559 |
| Sample 142 | 0.011863237 | -0.014348775 | 0.02359763 | 0.009840483 | 0.014273659 |
| Sample 143 | 0.001149868 | -0.002130791 | 0.01517246 | 0.020459606 | 0.023378752 |
| Sample 144 | 0.002402029 | -0.018174303 | 0.061588863 | 0.033958025 | 0.021842678 |
| Sample 145 | 0.016013793 | -0.034553098 | 0.034337558 | 0.022361484 | 0.046279723 |
| Sample 146 | 0.007497641 | -0.016656582 | 0.051680727 | 0.03172813 | 0.026267456 |
| Sample 147 | 0.014374007 | -0.01302846 | 0.027101188 | 0.004478471 | 0.016560405 |
| Sample 148 | 0.005110635 | -0.017576205 | 0.020246964 | 0.032559135 | 0.029773228 |
| Sample 149 | 0.014455401 | -0.008429528 | 0.017631825 | 0.025460605 | 0.053206045 |
| Sample 150 | 0.054531933 | -0.033339434 | 0.035324883 | 0.02958562 | 0.044590629 |
| Sample 151 | -0.010040548 | -0.016244275 | 0.062369892 | 0.023741647 | 0.005937366 |
| Sample 152 | 0.010839942 | -0.033653169 | 0.053546415 | 0.052375273 | 0.027263651 |
| Sample 153 | 0.027744987 | -0.022447045 | 0.051755156 | 0.030418655 | 0.028764326 |

| Bootstrapped Samples | a*b for CS Construct | a*b for CVC Construct | a*b for EH Construct | a*b for HSGS Construct | a*b for PSF Construct |
|---|---|---|---|---|---|
| Sample 154 | 0.009427921 | -0.005618732 | 0.029542075 | 0.014788531 | 0.055977395 |
| Sample 155 | 0.027726429 | -0.02704537 | 0.048890395 | 0.040214158 | 0.03912872 |
| Sample 156 | 0.010242553 | -0.002553388 | 0.017529674 | 0.009740156 | 0.011229693 |
| Sample 157 | 0.018506444 | -0.01754502 | 0.027296329 | 0.035176723 | 0.034936946 |
| Sample 158 | 0.039370376 | -0.019591235 | 0.032238264 | 0.024869697 | 0.040453034 |
| Sample 159 | 0.013856032 | -0.012335513 | 0.036893056 | 0.034005545 | 0.020850955 |
| Sample 160 | 0.013391285 | -0.005551274 | 0.039317792 | 0.038550079 | 0.026943313 |
| Sample 161 | 0.008772844 | -0.003477536 | 0.036416317 | 0.043981319 | 0.02269462 |
| Sample 162 | 0.019861581 | -0.031681093 | 0.040337323 | 0.049911525 | 0.025484443 |
| Sample 163 | 0.032081626 | -0.037425313 | 0.055831298 | 0.034715414 | 0.032716381 |
| Sample 164 | 0.051088644 | -0.034242849 | 0.065322574 | 0.006589903 | 0.049077425 |
| Sample 165 | 0.009824019 | 0.007514271 | 0.020259774 | 0.021628708 | 0.015944557 |
| Sample 166 | -0.003152257 | -0.010618947 | 0.016177079 | 0.052817403 | 0.034845853 |
| Sample 167 | 0.032906662 | -0.053831484 | 0.061019016 | 0.079989005 | 0.031837102 |
| Sample 168 | -0.021527301 | -0.051113153 | 0.054843631 | 0.036449642 | 0.032273959 |
| Sample 169 | 0.012065387 | -0.004554527 | 0.009971704 | 0.02328998 | 0.027100661 |
| Sample 170 | 0.023438185 | -0.007925886 | 0.024088462 | 0.054146483 | 0.022188753 |
| Sample 171 | 0.0181523 | -0.023355951 | 0.073516687 | 0.046574453 | 0.056906724 |
| Sample 172 | -0.013872646 | -0.00412453 | 0.054959756 | 0.046581599 | -0.003430632 |
| Sample 173 | -0.027535375 | -0.018833156 | 0.066022565 | 0.02193838 | 0.034947337 |
| Sample 174 | 0.027897744 | -0.024538925 | 0.047364352 | 0.011740778 | 0.03212056 |
| Sample 175 | 0.03047594 | -0.039552532 | 0.050012339 | 0.081290868 | 0.037000389 |
| Sample 176 | 0.018873467 | 0.002532055 | 0.010131378 | 0.021745707 | 0.017105185 |
| Sample 177 | 0.014778155 | -0.027871238 | 0.041989999 | 0.02967624 | 0.038451649 |
| Sample 178 | 0.015280054 | -0.025289912 | 0.034823836 | 0.045631264 | 0.043701887 |
| Sample 179 | -0.009505739 | 0.004249686 | 0.051559386 | 0.014424533 | 0.020873304 |
| Sample 180 | 0.018195497 | -0.019716255 | 0.029633019 | 0.007268125 | 0.045346569 |
| Sample 181 | 0.043539719 | -0.041038828 | 0.039440406 | 0.065486793 | 0.076473761 |
| Sample 182 | -0.000794602 | -0.024068372 | 0.065873728 | 0.029613062 | 0.025752867 |
| Sample 183 | 0.027809035 | -0.017242297 | 0.049545123 | 0.025969829 | 0.032995909 |
| Sample 184 | 0.003379078 | -0.004033825 | 0.044122467 | 0.012935001 | 0.022163069 |

| Bootstrapped Samples | a*b for CS Construct | a*b for CVC Construct | a*b for EH Construct | a*b for HSGS Construct | a*b for PSF Construct |
|---|---|---|---|---|---|
| Sample 185 | 0.007396604 | -0.000473759 | 0.034102296 | 0.018779045 | 0.040178935 |
| Sample 186 | 0.000469784 | -0.010526691 | 0.045837844 | 0.054314493 | 0.03938244 |
| Sample 187 | 0.004167421 | -0.010074292 | 0.02940592 | 0.034498939 | 0.03545422 |
| Sample 188 | 0.034122147 | -0.010311927 | 0.018406213 | 0.037669765 | 0.015877052 |
| Sample 189 | 0.005873071 | -0.00731099 | 0.032879553 | 0.038682513 | 0.016293367 |
| Sample 190 | 0.008830718 | -0.011530639 | 0.043349802 | 0.020743654 | 0.018028055 |
| Sample 191 | 0.037773898 | -0.036422696 | 0.049720635 | 0.009957935 | 0.079552958 |
| Sample 192 | -0.006885836 | -0.000360164 | 0.033881744 | 0.030412858 | 0.013552399 |
| Sample 193 | 0.01069735 | -0.013534408 | 0.029386827 | 0.022241605 | 0.00573452 |
| Sample 194 | 0.023136221 | -0.026989864 | 0.084603358 | 0.021991813 | 0.015301595 |
| Sample 195 | 0.005222466 | -0.014126213 | 0.044305035 | 0.018485933 | 0.019695161 |
| Sample 196 | 0.007346131 | -0.009229147 | 0.009994073 | 0.024738284 | 0.027027879 |
| Sample 197 | 2.43884E-05 | 0.00385843 | 0.060963962 | 0.033576933 | 0.043370379 |
| Sample 198 | 0.005035065 | -0.010736259 | 0.026714359 | 0.018738768 | 0.014106272 |
| Sample 199 | 0.02963667 | -0.018880095 | 0.011415533 | 0.022648379 | 0.05844601 |
| Sample 200 | 0.033639056 | -0.017942549 | 0.04087596 | 0.020747201 | 0.069011451 |
| Sample 201 | 0.013494162 | -0.00926082 | 0.033300873 | 0.007125007 | 0.031507149 |
| Sample 202 | 0.040623488 | -0.01859041 | 0.051075812 | 0.035784626 | 0.038618187 |
| Sample 203 | 0.041464649 | -0.022447509 | 0.040390013 | 0.060288369 | 0.003228583 |
| Sample 204 | 0.032602202 | -0.031345874 | 0.061733504 | 0.066614656 | 0.046524532 |
| Sample 205 | 0.021783233 | 0.007536688 | 0.051367859 | 0.016663875 | 0.011381831 |
| Sample 206 | 0.018702852 | -0.014578232 | 0.055928737 | 0.017625313 | 0.033507437 |
| Sample 207 | 0.017772321 | 0.002388816 | 0.031762109 | 0.027990304 | 0.01219575 |
| Sample 208 | 0.01107 | -0.019525677 | 0.059504608 | 0.033366984 | 0.033825845 |
| Sample 209 | 0.026046603 | -0.003927654 | 0.033167583 | 0.046372549 | 0.012280761 |
| Sample 210 | 0.018226556 | -0.002521571 | 0.036956518 | 0.01561226 | 0.015294454 |
| Sample 211 | 0.063397737 | -0.050559244 | 0.040958812 | 0.028226738 | 0.05232994 |
| Sample 212 | 0.064821532 | -0.056736845 | 0.088479242 | 0.017364606 | 0.062353096 |
| Sample 213 | 0.025010496 | -0.021313431 | 0.037736332 | 0.041456082 | 0.027220049 |
| Sample 214 | 0.053450384 | -0.032544223 | 0.018266538 | 0.037877401 | 0.062095815 |
| Sample 215 | 0.005633289 | -0.008814448 | 0.047591104 | 0.045699261 | 0.000729029 |

| Bootstrapped Samples | a*b for CS Construct | a*b for CVC Construct | a*b for EH Construct | a*b for HSGS Construct | a*b for PSF Construct |
|---|---|---|---|---|---|
| Sample 216 | 0.023588234 | -0.023123228 | 0.005725169 | 0.033158643 | 0.061582264 |
| Sample 217 | 0.003538818 | -0.007132624 | 0.022412292 | 0.034138054 | 0.013041607 |
| Sample 218 | 0.017933338 | -0.014271656 | 0.059262505 | 0.020169492 | 0.044263595 |
| Sample 219 | 0.019587486 | -0.022228776 | 0.038486477 | 0.068367777 | 0.033286302 |
| Sample 220 | 0.019095733 | -0.043617944 | 0.02221422 | 0.051229084 | 0.012244838 |
| Sample 221 | 0.024136655 | -0.039355879 | 0.052994967 | 0.020310219 | 0.032070991 |
| Sample 222 | 0.022856446 | -0.039574055 | 0.06116121 | 0.023034178 | 0.034956838 |
| Sample 223 | 0.007960962 | -0.003483467 | 0.053129688 | 0.038532044 | 0.018797493 |
| Sample 224 | 0.022352235 | -0.035775772 | 0.07110481 | 0.057166752 | 0.00207741 |
| Sample 225 | 0.013938199 | -0.008126956 | 0.032386493 | 0.00693024 | 0.033624861 |
| Sample 226 | -0.000695438 | -0.017031722 | 0.059943721 | 0.053548958 | 0.022600431 |
| Sample 227 | 0.037896435 | -0.07101476 | 0.079782 | 0.034895921 | 0.070043777 |
| Sample 228 | -0.002188542 | -0.023127222 | 0.027815545 | 0.041271645 | 0.020694303 |
| Sample 229 | 0.012848351 | -0.034724911 | 0.02444143 | 0.043892103 | 0.049755351 |
| Sample 230 | 0.02747254 | -0.045131 | 0.041696072 | 0.046687486 | 0.038078851 |
| Sample 231 | 0.034776329 | -0.019689692 | 0.043189347 | 0.016944289 | 0.046111845 |
| Sample 232 | 0.040071694 | -0.035213268 | 0.033980654 | 0.038652621 | 0.030007062 |
| Sample 233 | 0.008162434 | -0.023965859 | 0.051909128 | 0.022076432 | 0.013117349 |
| Sample 234 | -0.037354116 | -0.002640713 | 0.052077496 | 0.021531817 | 0.018107273 |
| Sample 235 | -0.009185782 | -0.004522666 | 0.079718429 | 0.018446713 | 0.039044238 |
| Sample 236 | 0.042486329 | -0.050981125 | 0.078770974 | 0.043108767 | 0.021085476 |
| Sample 237 | 0.011855881 | -0.028545084 | 0.057954749 | 0.029443881 | 0.043736583 |
| Sample 238 | 0.020133908 | -0.036752394 | 0.036883527 | 0.039123402 | 0.027670411 |
| Sample 239 | -0.006666588 | -0.020901061 | 0.040142279 | 0.026049331 | 0.022890484 |
| Sample 240 | 0.01974842 | -0.032093639 | 0.043510202 | 0.054912025 | 0.036771801 |
| Sample 241 | -0.004221287 | -0.00853968 | 0.065619906 | 0.048166239 | 0.043923048 |
| Sample 242 | 0.018500237 | -0.028697996 | 0.044471073 | 0.037216904 | 0.042825817 |
| Sample 243 | 0.057867941 | -0.043636959 | 0.052356962 | 0.023884922 | 0.061843537 |
| Sample 244 | 0.037337326 | -0.018873747 | 0.046235799 | 0.038369643 | 0.05038308 |
| Sample 245 | 0.021225437 | -0.012291311 | 0.045674583 | 0.017999475 | 0.047426299 |
| Sample 246 | 0.021012649 | -0.01771298 | 0.035141031 | 0.041332451 | 0.009451964 |

| Bootstrapped Samples | a*b for CS Construct | a*b for CVC Construct | a*b for EH Construct | a*b for HSGS Construct | a*b for PSF Construct |
|---|---|---|---|---|---|
| Sample 247 | 0.007735476 | -0.012738145 | 0.022429424 | 0.027124349 | 0.078204546 |
| Sample 248 | 0.001933685 | -0.017819322 | 0.061789305 | 0.040517854 | 0.00755864 |
| Sample 249 | 0.016480894 | -0.06178551 | 0.110865591 | 0.067416864 | 0.054868892 |
| Sample 250 | -0.004134204 | -0.020123617 | 0.044129238 | 0.036268472 | 0.032820763 |
| Sample 251 | -0.026027852 | -0.033439686 | 0.049175417 | 0.020565547 | 0.075138266 |
| Sample 252 | 0.007796601 | -0.006151885 | 0.011645382 | 0.03107506 | 0.006799163 |
| Sample 253 | 0.050571034 | -0.049096288 | 0.084124084 | 0.060558843 | 0.060504664 |
| Sample 254 | 0.000679666 | 0.006890752 | 0.03646032 | 0.037896099 | 0.008498771 |
| Sample 255 | 0.022348373 | -0.042676682 | 0.082297476 | 0.043466202 | 0.036518806 |
| Sample 256 | 0.000976869 | -0.014725936 | 0.045599458 | 0.034040842 | 0.008212218 |
| Sample 257 | 0.033159928 | -0.044336333 | 0.061765833 | 0.061828176 | 0.025557062 |
| Sample 258 | -0.006764328 | -0.005043062 | 0.024839293 | 0.033646708 | 0.038410007 |
| Sample 259 | 0.035757006 | -0.016852085 | 0.045482156 | 0.024966288 | 0.048103521 |
| Sample 260 | 0.015445786 | -0.011414505 | 0.024568442 | 0.041860093 | 0.041332871 |
| Sample 261 | 0.023167905 | -0.038759631 | 0.045990526 | 0.03628054 | 0.046053092 |
| Sample 262 | 0.017372757 | -0.038974182 | 0.052289241 | 0.053609906 | 0.018662268 |
| Sample 263 | 0.002960839 | -0.004975211 | 0.059114718 | 0.006891919 | 0.005986604 |
| Sample 264 | -0.008370084 | -0.010419409 | 0.033765909 | 0.015600521 | 0.0441452 |
| Sample 265 | 0.032089921 | -0.021323792 | 0.026743264 | 0.08258514 | 0.028703999 |
| Sample 266 | 0.025314922 | -0.057843083 | 0.029951608 | 0.041536188 | 0.070103186 |
| Sample 267 | 0.025673906 | -0.006713842 | 0.009929111 | 0.030862344 | 0.03249401 |
| Sample 268 | 0.00213765 | -0.015340153 | 0.05805368 | 0.067154698 | 0.000241333 |
| Sample 269 | 0.013508234 | -0.005592129 | 0.016537568 | 0.050360277 | 0.018857382 |
| Sample 270 | 0.031033273 | -0.031417055 | 0.05711528 | 0.016276749 | 0.035009868 |
| Sample 271 | 0.051702629 | -0.035695565 | 0.042843652 | 0.041369983 | 0.033131282 |
| Sample 272 | 0.002473253 | -0.004971161 | 0.015210875 | 0.014905504 | 0.020000143 |
| Sample 273 | 0.036122784 | -0.038755458 | 0.046941491 | 0.061474448 | 0.036046646 |
| Sample 274 | -0.005279215 | -0.005529166 | 0.080809094 | 0.025342414 | 0.014485516 |
| Sample 275 | 0.020203779 | 0.00201601 | 0.051810105 | 0.033108 | 0.000855732 |
| Sample 276 | 0.024073106 | -0.029071165 | 0.05493196 | 0.041598321 | 0.027075854 |
| Sample 277 | 0.038448693 | -0.036783893 | 0.060021597 | 0.043595568 | 0.045728626 |

| Bootstrapped Samples | a*b for CS Construct | a*b for CVC Construct | a*b for EH Construct | a*b for HSGS Construct | a*b for PSF Construct |
|---|---|---|---|---|---|
| Sample 278 | 0.018900687 | -0.031248659 | 0.049840361 | 0.023654575 | 0.028067907 |
| Sample 279 | -0.039733341 | -0.026780474 | 0.066574652 | 0.05064206 | 0.025401769 |
| Sample 280 | 0.014141908 | -0.022294823 | 0.028499081 | 0.051040951 | 0.011383557 |
| Sample 281 | -0.001804262 | -0.01208938 | 0.045102171 | 0.017358073 | 0.017794606 |
| Sample 282 | 0.010522592 | -0.041988596 | 0.072157972 | 0.006659146 | 0.019153555 |
| Sample 283 | 0.027125382 | -0.005637008 | 0.059218051 | 0.046849679 | 0.029577081 |
| Sample 284 | 0.033202289 | -0.037014802 | 0.055840641 | 0.038697899 | 0.03558768 |
| Sample 285 | 0.049810573 | -0.016652815 | 0.048610401 | 0.017900558 | 0.071597648 |
| Sample 286 | 0.043476668 | -0.000606807 | 0.050518342 | 0.032880799 | 0.044565432 |
| Sample 287 | 0.032467387 | -0.038651126 | 0.027624694 | 0.090632011 | 0.046713695 |
| Sample 288 | 0.011715889 | -0.034615579 | 0.039408482 | 0.034367055 | 0.043215508 |
| Sample 289 | 0.009542549 | -0.012755253 | 0.045143599 | 0.037246957 | 0.00950702 |
| Sample 290 | 0.051730665 | -0.041673608 | 0.049522341 | 0.026296094 | 0.063064213 |
| Sample 291 | 0.015662114 | -0.030316052 | 0.032552207 | 0.040782971 | 0.063969274 |
| Sample 292 | 0.002752289 | -0.020110261 | 0.061106944 | 0.036207201 | 0.026717106 |
| Sample 293 | 0.01048627 | -0.019407567 | 0.033079414 | 0.025153573 | 0.035936843 |
| Sample 294 | 0.002081255 | 3.83278E-05 | 0.055032227 | 0.052420865 | 0.031309579 |
| Sample 295 | 0.071711209 | -0.049774739 | 0.078901949 | 0.077621777 | 0.01272902 |
| Sample 296 | 0.029992251 | -0.027145709 | 0.039079305 | 0.036582149 | 0.024844002 |
| Sample 297 | 0.009162295 | -0.026456511 | 0.064946222 | 0.02295052 | 0.044405638 |
| Sample 298 | -0.001640022 | -0.023941976 | 0.072157129 | 0.062751046 | 0.003524149 |
| Sample 299 | 0.01766663 | -0.005636699 | 0.050351132 | 0.038743696 | 0.006998974 |
| Sample 300 | 0.03096025 | -0.028938375 | 0.063698854 | 0.029475412 | 0.038585188 |
| Sample 301 | 0.047134671 | -0.031025231 | 0.045196141 | 0.040795301 | 0.020426081 |
| Sample 302 | 0.01655313 | -0.019760176 | 0.021905551 | 0.027617187 | 0.049199709 |
| Sample 303 | 0.043466909 | -0.039564931 | 0.066536093 | 0.019114877 | 0.03707519 |
| Sample 304 | 0.019134111 | -0.010059162 | 0.017487423 | 0.027153137 | 0.008699547 |
| Sample 305 | 0.033712217 | -0.020010048 | 0.025658023 | 0.034460404 | 0.050629587 |
| Sample 306 | -6.27115E-05 | -0.013893014 | 0.030160364 | 0.014092679 | 0.03845547 |
| Sample 307 | 0.037760728 | -0.028964455 | 0.026836659 | 0.043466329 | 0.052009213 |
| Sample 308 | 0.025770262 | -0.032176458 | 0.049982424 | 0.084181739 | -0.000348895 |

| Bootstrapped Samples | a*b for CS Construct | a*b for CVC Construct | a*b for EH Construct | a*b for HSGS Construct | a*b for PSF Construct |
|---|---|---|---|---|---|
| Sample 309 | 0.023443244 | -0.049802764 | 0.04016921 | 0.072285419 | 0.036426216 |
| Sample 310 | 0.006646412 | -0.00215361 | 0.011790939 | 0.032011119 | 0.01644966 |
| Sample 311 | 0.018965964 | -0.003815806 | 0.008370558 | 0.012386407 | 0.015654613 |
| Sample 312 | 0.021632908 | -0.016524756 | 0.028608192 | 0.046157965 | 0.019401663 |
| Sample 313 | 0.015386911 | -0.011849002 | 0.021290993 | 0.015338729 | 0.015337616 |
| Sample 314 | 0.012071089 | -0.024340408 | 0.043206198 | 0.037366532 | 0.016744327 |
| Sample 315 | 0.066203622 | -0.023709616 | 0.054897431 | 0.048593394 | 0.068956094 |
| Sample 316 | 0.017981902 | -0.030173787 | 0.04872264 | 0.044289535 | 0.024722839 |
| Sample 317 | 0.026050287 | -0.057828824 | 0.074578075 | 0.053932285 | 0.040565228 |
| Sample 318 | 0.009378069 | -0.009409774 | 0.058415565 | 0.053288399 | -0.008338785 |
| Sample 319 | 0.00750125 | -0.009173964 | 0.016078906 | 0.032494497 | 0.03564459 |
| Sample 320 | 0.027984941 | -0.015201241 | 0.015296928 | 0.017564594 | 0.025143559 |
| Sample 321 | 0.018131913 | -0.055558835 | 0.048813175 | 0.041935625 | 0.072314391 |
| Sample 322 | 0.01948741 | -0.030456914 | 0.050706827 | 0.033703549 | 0.049102982 |
| Sample 323 | 0.018988775 | -0.031491197 | 0.026844225 | 0.032299332 | 0.050142123 |
| Sample 324 | 0.023521316 | -0.012164741 | 0.041312252 | 0.032286383 | 0.026410461 |
| Sample 325 | 0.027842057 | -0.024466306 | 0.048605515 | 0.021549166 | 0.03603828 |
| Sample 326 | 0.014548595 | -0.020073836 | 0.039354159 | 0.025855049 | 0.019172644 |
| Sample 327 | 0.047908822 | -0.033699019 | 0.041621703 | 0.029926176 | 0.048465331 |
| Sample 328 | 0.017064964 | -0.023099714 | 0.035592811 | 0.006821924 | 0.022281703 |
| Sample 329 | 0.021998461 | -0.011156636 | 0.085596505 | 0.066573127 | 0.009097983 |
| Sample 330 | 0.040301891 | -0.058016772 | 0.035242912 | 0.097995402 | 0.031635456 |
| Sample 331 | 0.041279183 | -0.034834867 | 0.017207138 | 0.063548181 | 0.018443207 |
| Sample 332 | -0.003802929 | -0.006904365 | 0.049666025 | 0.036828236 | 0.069701784 |
| Sample 333 | 0.04973688 | -0.028452644 | 0.011430588 | 0.049248065 | 0.054241186 |
| Sample 334 | 0.029815238 | -0.01205474 | 0.005213836 | 0.027702479 | 0.028845932 |
| Sample 335 | 0.001253501 | -0.012910722 | 0.040965751 | 0.023753231 | 0.037295605 |
| Sample 336 | 0.022836547 | -0.015391216 | 0.027342068 | 0.007682463 | 0.031386556 |
| Sample 337 | 0.015251044 | -0.006106587 | 0.028509975 | 0.021595444 | 0.028340225 |
| Sample 338 | 0.00725916 | -0.012003227 | 0.069342013 | 0.063622811 | 0.032586223 |
| Sample 339 | 0.009117859 | -0.006512712 | 0.023100176 | 0.03436927 | 0.017884832 |

366

| Bootstrapped Samples | a*b for CS Construct | a*b for CVC Construct | a*b for EH Construct | a*b for HSGS Construct | a*b for PSF Construct |
|---|---|---|---|---|---|
| Sample 340 | 0.035219808 | -0.003118501 | 0.036771336 | 0.021175743 | 0.043370224 |
| Sample 341 | 0.027535555 | -0.04336865 | 0.058878877 | 0.049737145 | 0.026642778 |
| Sample 342 | 0.0270456 | -0.010831189 | 0.023899899 | 0.048098816 | 0.040590426 |
| Sample 343 | 0.009890495 | -0.015452153 | 0.02239475 | 0.042241939 | 0.034383834 |
| Sample 344 | 0.014563814 | -0.019329915 | 0.031119928 | 0.013537914 | 0.025218044 |
| Sample 345 | 0.010567179 | -0.017954232 | 0.04948593 | 0.044673124 | 0.021979564 |
| Sample 346 | 0.035959929 | -0.047267793 | 0.067978666 | 0.013032619 | 0.064736878 |
| Sample 347 | 0.002192834 | 0.006469158 | 0.082504048 | 0.051603212 | 0.03276534 |
| Sample 348 | 0.028165476 | -0.02473661 | 0.042097279 | 0.036876749 | 0.052257397 |
| Sample 349 | 0.00952197 | -0.007031121 | 0.038297528 | -0.005708943 | 0.074934413 |
| Sample 350 | 0.022892231 | -0.030198964 | 0.048933326 | 0.04415852 | 0.029075549 |
| Sample 351 | 0.025834858 | -0.028688201 | 0.045719094 | 0.018089631 | 0.04341577 |
| Sample 352 | 0.012837672 | -0.025546043 | 0.046190126 | 0.005216202 | 0.043481849 |
| Sample 353 | 0.05427929 | -0.055508228 | 0.020119259 | 0.069298289 | 0.034847156 |
| Sample 354 | 0.044253681 | -0.025865657 | 0.00442235 | 0.080423838 | 0.064752831 |
| Sample 355 | 0.021780276 | -0.031019042 | 0.052709854 | 0.018665522 | 0.048593795 |
| Sample 356 | 0.006898896 | 0.019057626 | 0.032654361 | 0.010288225 | 0.034684083 |
| Sample 357 | 0.007468918 | -0.01578185 | 0.038038979 | 0.031978747 | 0.033641643 |
| Sample 358 | 0.025960578 | -0.023456049 | 0.044342465 | 0.074467359 | 0.036876824 |
| Sample 359 | 0.033572334 | -0.00946497 | 0.054384917 | 0.051775783 | 0.037398107 |
| Sample 360 | 0.014970831 | -0.019414253 | 0.060361589 | 0.007666683 | 0.023689072 |
| Sample 361 | 0.00413778 | -0.022282847 | 0.029697309 | 0.024463958 | 0.028205143 |
| Sample 362 | 0.022720808 | -0.044784678 | 0.069722589 | 0.04332899 | 0.023976137 |
| Sample 363 | 0.05329518 | -0.041176367 | 0.036436578 | 0.031442154 | 0.031316919 |
| Sample 364 | 0.02257382 | -0.035659003 | 0.041037841 | 0.037985049 | 0.03506031 |
| Sample 365 | 0.029277717 | -0.014842555 | 0.044854847 | 0.035286625 | 0.030446422 |
| Sample 366 | -0.015064288 | -0.025857571 | 0.07332348 | 0.028006567 | 0.028205455 |
| Sample 367 | 0.0175061 | -0.021869657 | 0.042077095 | 0.02957093 | 0.033426546 |
| Sample 368 | 0.019754942 | -0.020622968 | 0.026602077 | 0.03557248 | 0.056166032 |
| Sample 369 | 0.008843362 | 0.000285565 | 0.056486347 | 0.029639146 | 0.017507204 |
| Sample 370 | 0.021990751 | -0.023845205 | 0.042135804 | 0.031366571 | 0.041989348 |

| Bootstrapped Samples | a*b for CS Construct | a*b for CVC Construct | a*b for EH Construct | a*b for HSGS Construct | a*b for PSF Construct |
|---|---|---|---|---|---|
| Sample 371 | 0.030825331 | -0.032425502 | 0.033998736 | 0.031994515 | 0.065834748 |
| Sample 372 | 0.006047547 | -0.01258672 | 0.054051069 | 0.026499928 | 0.001873603 |
| Sample 373 | 0.039421091 | -0.028680769 | 0.046280874 | 0.018436821 | 0.021201872 |
| Sample 374 | 0.034138009 | -0.039021797 | 0.067660853 | 0.036458925 | 0.033735206 |
| Sample 375 | 0.024795584 | -0.017512243 | 0.041139955 | 0.028734006 | 0.02358401 |
| Sample 376 | 0.03689528 | -0.016197456 | 0.048020673 | 0.046061492 | 0.045382828 |
| Sample 377 | 0.014990779 | -0.01807536 | 0.060557654 | 0.013035847 | 0.028863216 |
| Sample 378 | 0.025481601 | -0.015740905 | 0.045528701 | 0.028441568 | 0.019312612 |
| Sample 379 | -0.000434169 | -0.026344197 | 0.066569053 | 0.026539467 | 0.037172233 |
| Sample 380 | 0.0134016 | -0.011884227 | 0.009785644 | 0.028049456 | 0.014918347 |
| Sample 381 | 0.023912526 | -0.0298139 | 0.026809209 | 0.049100141 | 0.030290528 |
| Sample 382 | 0.007422982 | -0.014037162 | 0.046504573 | 0.020060799 | 0.019944944 |
| Sample 383 | 0.026856027 | -0.027408134 | 0.070976444 | 0.046124802 | 0.039670518 |
| Sample 384 | 0.039356314 | -0.036425962 | 0.053177506 | 0.044517089 | 0.036355619 |
| Sample 385 | 0.014827341 | -0.021507611 | 0.030907836 | 0.063240709 | 0.026494396 |
| Sample 386 | 0.023351789 | -0.025294265 | 0.057629147 | 0.02208097 | 0.044507259 |
| Sample 387 | 0.012718215 | 0.005041224 | 0.021388341 | 0.037002853 | 0.049233884 |
| Sample 388 | 0.04601628 | -0.04041327 | 0.041798843 | 0.055699195 | 0.03963099 |
| Sample 389 | 0.008942736 | -0.016720489 | 0.01673624 | 0.027467947 | 0.020758885 |
| Sample 390 | 0.047067552 | -0.045271418 | 0.038497732 | 0.057482703 | 0.052960816 |
| Sample 391 | 0.010940065 | -0.028604408 | 0.049255149 | 0.071806067 | 0.035059017 |
| Sample 392 | 0.020867708 | -0.025800905 | 0.080314959 | 0.012797995 | 0.049122353 |
| Sample 393 | 0.010509906 | -0.006698818 | 0.041614721 | 0.015962825 | 0.02938036 |
| Sample 394 | 0.027538749 | -0.01035985 | 0.066318136 | 0.03274664 | 0.04209619 |
| Sample 395 | 0.044771078 | -0.038236428 | 0.082459234 | 0.003392788 | 0.04126224 |
| Sample 396 | 0.033054577 | -0.040615857 | 0.060596839 | 0.023529863 | 0.061147645 |
| Sample 397 | 0.019010714 | -0.014352495 | 0.062769398 | 0.008549065 | 0.019706565 |
| Sample 398 | 0.03302076 | -0.020389351 | 0.042940212 | 0.051350349 | 0.03211884 |
| Sample 399 | -0.009457306 | -0.007007038 | 0.052606265 | 0.033958511 | 0.023822081 |
| Sample 400 | 0.044737825 | -0.019267659 | 0.015037436 | 0.029664101 | 0.085730805 |
| Sample 401 | 0.024420016 | -0.008984675 | 0.047844962 | 0.042358815 | 0.026012988 |

| Bootstrapped Samples | a*b for CS Construct | a*b for CVC Construct | a*b for EH Construct | a*b for HSGS Construct | a*b for PSF Construct |
|---|---|---|---|---|---|
| Sample 402 | 0.023613933 | -0.016125381 | 0.056996636 | 0.030176124 | 0.049559855 |
| Sample 403 | 0.040140098 | -0.008957274 | 0.029653814 | -0.000486523 | 0.046090999 |
| Sample 404 | -0.003259212 | 0.00242182 | 0.050905553 | 0.026754388 | 0.016538275 |
| Sample 405 | 0.001694601 | -0.010070082 | 0.040096588 | 0.016291344 | 0.045009585 |
| Sample 406 | 0.020031959 | -0.029560767 | 0.065359523 | 0.077590307 | 0.019236014 |
| Sample 407 | -0.008668749 | 0.001058231 | 0.035578212 | 0.04497983 | 0.002529268 |
| Sample 408 | -0.002180307 | 0.001728764 | 0.065681514 | 0.0195184 | 0.042660431 |
| Sample 409 | 0.037402856 | -0.037854322 | 0.056091873 | 0.066966169 | 0.014046268 |
| Sample 410 | 0.033111416 | -0.021363605 | 0.039303813 | 0.025761618 | 0.03261607 |
| Sample 411 | 0.000550883 | -0.007773993 | 0.057626614 | 0.015017646 | 0.020835967 |
| Sample 412 | 0.014507877 | -0.007324235 | 0.029982878 | 0.046680311 | 0.011388932 |
| Sample 413 | 0.010402055 | -0.023476664 | 0.032008217 | 0.060940751 | 0.015078405 |
| Sample 414 | 0.015186902 | -0.014155103 | 0.035841461 | 0.001029238 | 0.028423712 |
| Sample 415 | -0.010444985 | 0.043624976 | 0.062164079 | 0.035468336 | -0.013874674 |
| Sample 416 | 0.022266445 | -0.01893325 | 0.049941013 | 0.028653401 | 0.009512531 |
| Sample 417 | 0.015996196 | -0.029698288 | 0.047294256 | 0.015032141 | 0.030713119 |
| Sample 418 | 0.031500055 | -0.028676022 | 0.03798721 | 0.041449163 | 0.00565897 |
| Sample 419 | 0.038399968 | -0.020766926 | 0.036145368 | 0.044317438 | 0.038422914 |
| Sample 420 | 0.023630702 | -0.037358505 | 0.03584012 | 0.032068648 | 0.077308769 |
| Sample 421 | -0.001587034 | -0.011872088 | 0.047787517 | 0.02503224 | 0.023646092 |
| Sample 422 | 0.041956461 | -0.043209257 | 0.062644426 | 0.069004756 | 0.021928277 |
| Sample 423 | 0.012742482 | -0.02381897 | 0.022720871 | 0.035302852 | 0.052090048 |
| Sample 424 | 0.00436846 | -0.011166588 | 0.04208954 | 0.041477437 | 0.013954547 |
| Sample 425 | 0.022957937 | -0.005228823 | 0.01488753 | 0.028706807 | 0.029543097 |
| Sample 426 | 0.047019496 | -0.045719725 | 0.048111632 | 0.029539988 | 0.026293946 |
| Sample 427 | 0.013362959 | -0.015750553 | 0.060185208 | 0.039014514 | 0.002104611 |
| Sample 428 | 0.030365598 | -0.053111579 | 0.04017436 | 0.044621422 | 0.062210885 |
| Sample 429 | 0.065656087 | -0.059619678 | 0.097343376 | 0.009873073 | 0.035525853 |
| Sample 430 | 0.020663139 | -0.017900427 | 0.042527365 | 0.041074853 | 0.033044486 |
| Sample 431 | 0.001354073 | -0.030762509 | 0.05793418 | 0.03835146 | 0.014851621 |
| Sample 432 | 0.020803938 | -0.017539696 | 0.06038605 | 0.042924705 | 0.022803226 |

| Bootstrapped Samples | a*b for CS Construct | a*b for CVC Construct | a*b for EH Construct | a*b for HSGS Construct | a*b for PSF Construct |
|---|---|---|---|---|---|
| Sample 433 | 0.025593831 | -0.024431499 | 0.015724167 | 0.038361014 | 0.034168568 |
| Sample 434 | 0.032801113 | -0.035452853 | 0.012145852 | 0.060809438 | 0.047436704 |
| Sample 435 | 0.038937858 | -0.045437628 | 0.061523829 | 0.074416439 | 0.03411858 |
| Sample 436 | 0.020100813 | -0.024984999 | 0.034934919 | 0.02130611 | 0.046302728 |
| Sample 437 | -0.003847192 | -0.035800344 | 0.090246272 | 0.024690756 | 0.006507811 |
| Sample 438 | 0.036172935 | -0.042754622 | 0.053175099 | 0.057129772 | 0.051493937 |
| Sample 439 | -0.004456683 | -0.005604825 | 0.063620194 | 0.030565439 | 0.028317475 |
| Sample 440 | -0.026676109 | -0.033057365 | 0.038991131 | 0.011909476 | 0.029355262 |
| Sample 441 | 0.050120268 | -0.05121121 | 0.044397392 | 0.026144059 | 0.06084526 |
| Sample 442 | 0.039373733 | -0.05393687 | 0.055813574 | 0.05216453 | 0.050892398 |
| Sample 443 | 0.06373736 | -0.079505316 | 0.068481858 | 0.034520592 | 0.086659823 |
| Sample 444 | 0.02503939 | -0.025893988 | 0.029804979 | 0.035233637 | 0.041060809 |
| Sample 445 | 0.020497852 | -0.016068238 | 0.023010156 | 0.015631847 | 0.025964353 |
| Sample 446 | 0.033242774 | -0.004762883 | 0.027235849 | 0.037554581 | 0.051136216 |
| Sample 447 | 0.010172831 | -0.007525243 | 0.02825557 | 0.024118024 | 0.018481215 |
| Sample 448 | 0.041350963 | -0.040191036 | 0.03386957 | 0.030366912 | 0.04646113 |
| Sample 449 | 0.011609119 | -0.002871139 | 0.01599802 | 0.02794749 | 0.022897798 |
| Sample 450 | 0.023645767 | -0.037191344 | 0.04576305 | 0.017839122 | 0.048369267 |
| Sample 451 | 0.013428302 | -0.014818222 | 0.034913584 | 0.018401872 | 0.016923185 |
| Sample 452 | 0.024995879 | 0.004855243 | 0.049055929 | 0.027370514 | 0.054712295 |
| Sample 453 | 0.029138049 | -0.015594394 | 0.02819416 | 0.021251984 | 0.041156787 |
| Sample 454 | 0.014461828 | -0.032489197 | 0.058162699 | 0.023149788 | 0.077554689 |
| Sample 455 | 0.031845702 | -0.031838928 | 0.031278924 | 0.047261409 | 0.031012471 |
| Sample 456 | 0.030174502 | -0.026744245 | 0.031979017 | 0.034453678 | 0.020180248 |
| Sample 457 | 0.011849955 | -0.025649274 | 0.027141501 | 0.049478332 | 0.022470904 |
| Sample 458 | 0.002204745 | -0.00124046 | 0.007022035 | 0.004308971 | 0.004197106 |
| Sample 459 | -0.029475076 | -0.005306773 | 0.05851785 | 0.023756406 | -0.001006573 |
| Sample 460 | 0.021454552 | -0.006534606 | 0.013952266 | 0.034685657 | 0.046790866 |
| Sample 461 | 0.021349735 | -0.012530226 | 0.044078961 | 0.073072251 | 0.022144396 |
| Sample 462 | 0.038688406 | -0.035289567 | 0.053252985 | 0.035477783 | 0.037024331 |
| Sample 463 | 0.033501193 | -0.011049572 | 0.024346939 | 0.022730553 | 0.041911449 |

| Bootstrapped Samples | a*b for CS Construct | a*b for CVC Construct | a*b for EH Construct | a*b for HSGS Construct | a*b for PSF Construct |
|---|---|---|---|---|---|
| Sample 464 | 0.030163157 | -0.023780268 | 0.051172481 | 0.034293027 | 0.038647482 |
| Sample 465 | 0.018868981 | -0.015825804 | 0.036671187 | 0.015285831 | 0.031742553 |
| Sample 466 | 0.020069625 | -0.024862561 | 0.04616898 | 0.047664578 | 0.020613502 |
| Sample 467 | -0.003804025 | 0.003505653 | 0.025986237 | 0.04653355 | 0.015591707 |
| Sample 468 | 0.034861171 | -0.00880842 | 0.062028098 | 0.029296759 | 0.024935218 |
| Sample 469 | 0.021001054 | -0.011931494 | 0.025392532 | 0.04555317 | 0.038255718 |
| Sample 470 | 0.044036334 | -0.01951129 | 0.071485534 | 0.040303006 | 0.043070892 |
| Sample 471 | 0.008098261 | -0.031989699 | 0.04649293 | 0.077723481 | 0.007045518 |
| Sample 472 | 0.016570605 | -0.010638463 | 0.03757821 | 0.028651571 | 0.026741633 |
| Sample 473 | 0.027924307 | -0.026008061 | 0.048420545 | 0.015071711 | 0.032466908 |
| Sample 474 | 0.023156819 | -0.036991651 | 0.098664106 | 0.070296181 | 0.038408126 |
| Sample 475 | 0.006519095 | -0.010414526 | 0.029413179 | 0.017064191 | 0.024568618 |
| Sample 476 | 0.028707793 | -0.037633123 | 0.032579474 | 0.065238859 | 0.031532268 |
| Sample 477 | 0.023553078 | -0.026367878 | 0.028657209 | 0.041640362 | 0.024659629 |
| Sample 478 | 0.01143404 | -0.007196307 | 0.031881305 | 0.023179075 | 0.030446949 |
| Sample 479 | 0.015182441 | -0.002952055 | 0.029622707 | 0.043686163 | 0.018000708 |
| Sample 480 | 0.010603607 | -0.00393348 | 0.018382379 | 0.065976227 | 0.052734445 |
| Sample 481 | 0.026496977 | -0.020277277 | 0.023046305 | 0.011924191 | 0.040444407 |
| Sample 482 | 0.010859161 | -0.009015064 | 0.038131005 | 0.025849715 | 0.002968711 |
| Sample 483 | 0.03002777 | -0.032065428 | 0.067289678 | 0.028365941 | 0.067870179 |
| Sample 484 | 0.008038663 | -0.022474841 | 0.030507515 | 0.028153136 | 0.097731721 |
| Sample 485 | 0.013875807 | -0.023628493 | 0.035996443 | 0.031700674 | 0.022065626 |
| Sample 486 | -0.003829631 | -0.003930503 | 0.024639767 | 0.046852282 | 0.031076779 |
| Sample 487 | 0.042884617 | -0.025680012 | 0.024734523 | 0.019710801 | 0.078381507 |
| Sample 488 | 0.012748126 | -0.044260296 | 0.042177689 | 0.056372195 | 0.058704524 |
| Sample 489 | -0.003428018 | -0.009982238 | 0.071658585 | 0.008992428 | 0.031255933 |
| Sample 490 | 0.025165768 | -0.023153508 | 0.050591661 | 0.031960093 | 0.028814555 |
| Sample 491 | 0.01842689 | -1.67857E-05 | 0.027043407 | 0.032361069 | 0.015691204 |
| Sample 492 | 0.022877191 | -0.017689273 | 0.029022669 | 0.055293527 | 0.025983718 |
| Sample 493 | 0.00897826 | -0.010399348 | 0.017998624 | 0.032169487 | 0.022160645 |
| Sample 494 | 0.019264819 | -0.005739156 | 0.039240846 | 0.036528081 | 0.030586087 |

| Bootstrapped Samples | a*b for CS Construct | a*b for CVC Construct | a*b for EH Construct | a*b for HSGS Construct | a*b for PSF Construct |
|---|---|---|---|---|---|
| Sample 495 | 0.022699327 | -0.031591544 | 0.032744119 | 0.017128722 | 0.069219269 |
| Sample 496 | 0.026829841 | -0.022694542 | 0.082576179 | -0.010877468 | 0.060141905 |
| Sample 497 | 0.014725693 | 0.003166869 | 0.049630464 | 0.049329428 | -0.001168717 |
| Sample 498 | 0.013940504 | -0.013095408 | 0.044964568 | 0.018750412 | 0.061901847 |
| Sample 499 | 0.025944509 | -0.012147919 | 0.025602611 | 0.03901393 | 0.055091374 |
| **a*b =** | **0.111983818** | **-0.021666646** | **0.043545448** | **0.034943508** | **0.032819763** |
| **S =** | **0.115101127** | **0.015707679** | **0.018784098** | **0.017511694** | **0.017966334** |
| **T =** | **0.972916779** | **-1.379366505** | **2.318208095** | **1.995438474** | **1.826736746** |

## Appendix F.2: Mediation Results for OCB-O Model

| Bootstrapped Samples | a*b for CS Construct | a*b for CVC Construct | a*b for EH Construct | a*b for HSGS Construct | a*b for PSF Construct |
|---|---|---|---|---|---|
| Sample 0 | 0.010210595 | -0.005767117 | 0.011642401 | 0.016494503 | 0.01211637 |
| Sample 1 | 0.024472755 | -0.032150636 | 0.029434661 | 0.046960621 | 0.054894466 |
| Sample 2 | 0.016899009 | -0.013590557 | 0.021299423 | 0.020700086 | 0.023261556 |
| Sample 3 | 0.025578009 | -0.012604985 | 0.06178789 | 0.052040008 | 0.033848992 |
| Sample 4 | -0.001371659 | -0.021203925 | 0.02140257 | 0.027846799 | 0.025378733 |
| Sample 5 | -0.011879276 | -0.001612808 | 0.022122589 | 0.011245416 | 0.006564579 |
| Sample 6 | 0.010841565 | -0.01406656 | 0.031006544 | 0.018293694 | 0.022179427 |
| Sample 7 | -0.013259011 | 0.000804808 | 0.031632656 | 0.027736212 | 0.023702146 |
| Sample 8 | 0.016227077 | -0.003480708 | 0.044238996 | 0.033837011 | 0.040519266 |
| Sample 9 | 0.01737959 | -0.018890067 | 0.035953309 | 0.027180497 | 0.015414896 |
| Sample 10 | 0.013259761 | -0.029270148 | 0.026507444 | 0.027232697 | 0.014499753 |
| Sample 11 | 0.025816814 | -0.01458083 | 0.013949303 | 0.023592542 | 0.007194583 |
| Sample 12 | 0.006895084 | -0.015908006 | 0.025001064 | 0.026853883 | 0.0161418 |
| Sample 13 | 0.048418863 | -0.054130204 | 0.047019421 | 0.018572333 | 0.056061215 |
| Sample 14 | 0.003695462 | -0.013469408 | 0.032939574 | 0.05032625 | 0.0131029 |
| Sample 15 | 0.012992713 | -0.015905801 | 0.014209827 | 0.025771347 | 0.01115551 |
| Sample 16 | 0.010344005 | -0.016934696 | 0.026451346 | 0.028996772 | 0.017563559 |

| Bootstrapped Samples | a*b for CS Construct | a*b for CVC Construct | a*b for EH Construct | a*b for HSGS Construct | a*b for PSF Construct |
|---|---|---|---|---|---|
| Sample 17 | 0.032052469 | -0.02870847 | 0.069798812 | 0.000505634 | 0.052558552 |
| Sample 18 | 0.001007586 | -0.020174643 | 0.038117929 | 0.025557555 | 0.014739534 |
| Sample 19 | 0.01516647 | -0.006641468 | 0.011494059 | 0.031488132 | 0.023892334 |
| Sample 20 | 0.01485169 | -0.01229573 | 0.003120757 | 0.042023792 | 0.030438341 |
| Sample 21 | 0.014412082 | -0.018838475 | 0.024353675 | 0.0016896 | 0.036943277 |
| Sample 22 | -0.002855712 | -0.006962859 | 0.036495237 | 0.013802752 | 0.016752181 |
| Sample 23 | -0.003662933 | -0.028745492 | 0.02992675 | 0.018884238 | 0.024223576 |
| Sample 24 | 0.010014972 | -0.03169679 | 0.042649683 | 0.028943148 | 0.027975324 |
| Sample 25 | 0.021951671 | -0.00526206 | 0.02941354 | 0.034244833 | 0.001328311 |
| Sample 26 | 0.008971372 | -0.018251223 | 0.021877078 | 0.036853573 | 0.024158652 |
| Sample 27 | -0.000130593 | -0.003930219 | 0.047492263 | 0.019250711 | 0.029093562 |
| Sample 28 | 0.011337654 | -0.018370762 | 0.064662261 | 0.039617161 | 0.032142122 |
| Sample 29 | 0.015215746 | 0.004812282 | 0.058353841 | 0.004504501 | 0.022724506 |
| Sample 30 | 0.015400751 | -0.011545022 | 0.028447574 | 0.011476994 | 0.011953494 |
| Sample 31 | 0.003269618 | -0.012117551 | 0.032276527 | 0.030164803 | 0.021315837 |
| Sample 32 | 0.009483335 | -0.010840987 | 0.042724457 | 0.021873426 | 0.024244217 |
| Sample 33 | 0.02493359 | -0.011223434 | 0.03891587 | 0.016955123 | 0.03445228 |
| Sample 34 | 0.008526368 | -0.022968574 | 0.031099026 | 0.035544871 | 0.032442181 |
| Sample 35 | 0.053504878 | -0.051296613 | 0.065033419 | 0.02148991 | 0.029863188 |
| Sample 36 | 0.010615146 | -0.012927038 | 0.008430558 | 0.064097835 | 0.003305277 |
| Sample 37 | 0.011793752 | -0.009325771 | 0.011948144 | 0.028909375 | 0.02264173 |
| Sample 38 | 0.011675748 | -0.024196007 | 0.042998502 | 0.007995943 | 0.030310073 |
| Sample 39 | 0.009790865 | -0.004074892 | 0.036032954 | 0.014755293 | 0.027851222 |
| Sample 40 | 0.004026799 | -0.011910911 | 0.038417313 | 0.029707379 | 0.022207953 |
| Sample 41 | 0.024266677 | -0.033502852 | 0.061431099 | 0.039718602 | 0.031161694 |
| Sample 42 | 0.015018616 | -0.01786326 | 0.033573526 | 0.026532873 | 0.025465645 |
| Sample 43 | 0.016408906 | -0.034461356 | 0.040458326 | 0.040756689 | 0.030188143 |
| Sample 44 | 0.010594995 | -0.014696447 | 0.01365056 | 0.029292751 | 0.009668509 |
| Sample 45 | 0.004969491 | -0.012979644 | 0.027850409 | 0.047700465 | 0.049923495 |
| Sample 46 | 0.01462455 | -0.031803691 | 0.02673156 | 0.030453112 | 0.031832381 |
| Sample 47 | 0.008416319 | -0.015084512 | 0.043672884 | 0.04705504 | 0.01262833 |

| Bootstrapped Samples | a*b for CS Construct | a*b for CVC Construct | a*b for EH Construct | a*b for HSGS Construct | a*b for PSF Construct |
|---|---|---|---|---|---|
| Sample 48 | 0.006341499 | -0.010854132 | 0.017854346 | 0.015418728 | 0.003109547 |
| Sample 49 | 0.014070381 | -0.016323063 | 0.036445509 | 0.026785061 | 0.002180671 |
| Sample 50 | 0.004080459 | -0.006029087 | 0.02361208 | 0.016207441 | 0.025556675 |
| Sample 51 | 0.010893459 | -0.017695208 | 0.031106693 | 0.018258846 | 0.00969843 |
| Sample 52 | 0.00342663 | -0.014641808 | 0.031369676 | 0.015137743 | 0.008779805 |
| Sample 53 | 0.014700835 | -0.029439057 | 0.057529641 | 0.016717622 | 0.047065336 |
| Sample 54 | 0.007967685 | -0.008504826 | 0.014373531 | 0.004809441 | 0.017061804 |
| Sample 55 | 0.005833328 | -0.01417265 | 0.034560889 | 0.026488372 | 0.005602657 |
| Sample 56 | 0.010591335 | -0.011766529 | 0.024510938 | 0.016209649 | 0.01426368 |
| Sample 57 | 0.004088834 | -0.00743615 | 0.024097497 | 0.009503537 | 0.016356633 |
| Sample 58 | 0.024334385 | -0.025657573 | 0.07440379 | 0.014171717 | 0.022636107 |
| Sample 59 | -0.012295992 | 0.01223963 | 0.032228009 | 0.023492387 | 0.019788102 |
| Sample 60 | 0.02118987 | -0.024261004 | 0.073022653 | 0.03859953 | 0.013156655 |
| Sample 61 | 0.010703569 | -0.01059133 | 0.024374776 | 0.015798807 | 0.016099722 |
| Sample 62 | 0.009317555 | -0.001909255 | 0.064449421 | 0.047888625 | -0.001735389 |
| Sample 63 | 0.004629089 | -0.007955243 | 0.020182717 | 0.030099699 | 0.017310391 |
| Sample 64 | 0.003937534 | -0.00323642 | 0.034138132 | 0.018273628 | 0.021440194 |
| Sample 65 | 0.026616537 | -0.008592306 | 0.019122082 | 0.009986996 | 0.03491187 |
| Sample 66 | 0.031400428 | -0.032603584 | 0.06006088 | 0.010738812 | 0.038845476 |
| Sample 67 | 0.005010313 | -0.009785552 | 0.023724173 | 0.031399432 | 0.014311923 |
| Sample 68 | 0.004418071 | -0.006869295 | 0.015573043 | 0.019267689 | 0.010138825 |
| Sample 69 | 0.004445705 | -0.010859146 | 0.009579637 | 0.012827866 | 0.00577308 |
| Sample 70 | 0.033103073 | -0.03158099 | 0.06443776 | 0.026049579 | 0.043698805 |
| Sample 71 | 0.027471286 | -0.023573794 | 0.043597939 | 0.009706703 | 0.030223969 |
| Sample 72 | 0.002995122 | -0.005300487 | 0.012340156 | 0.017150174 | 0.0091903 |
| Sample 73 | 0.027974785 | -0.001269423 | 0.027897168 | 0.00334675 | 0.041046526 |
| Sample 74 | 0.019933981 | -0.009946766 | 0.02320456 | 0.018881263 | 0.034253267 |
| Sample 75 | 0.023322092 | -0.014421879 | 0.031124768 | 0.034662322 | 0.018725597 |
| Sample 76 | -0.001718773 | -0.004503229 | 0.027578248 | 0.033397984 | -0.003322357 |
| Sample 77 | 0.017407579 | -0.028110193 | 0.042454294 | 0.035825777 | 0.019829967 |
| Sample 78 | 0.006805591 | -0.013802795 | 0.018420053 | 0.014072576 | 0.012738087 |

| Bootstrapped Samples | a*b for CS Construct | a*b for CVC Construct | a*b for EH Construct | a*b for HSGS Construct | a*b for PSF Construct |
|---|---|---|---|---|---|
| Sample 79 | 0.044549253 | -0.033941165 | 0.025631726 | 0.022951239 | 0.050257764 |
| Sample 80 | 0.013929911 | -0.014873128 | 0.024461663 | 0.025987405 | 0.025281145 |
| Sample 81 | 0.023868745 | -0.016023077 | 0.036598436 | 0.031412656 | 0.055229532 |
| Sample 82 | 0.021421709 | -0.036719475 | 0.029799005 | 0.020234115 | 0.018314021 |
| Sample 83 | 0.005371245 | 0.002767468 | 0.006872946 | 0.034866304 | 0.007982725 |
| Sample 84 | 0.001128422 | -0.008879299 | 0.013604842 | 0.017143073 | 0.014951471 |
| Sample 85 | 0.021793656 | -0.041044144 | 0.058884526 | 0.0293939 | 0.045747351 |
| Sample 86 | 0.012317976 | -0.01252826 | 0.026995756 | 0.016963768 | 0.014878349 |
| Sample 87 | 0.013361345 | -0.013898043 | 0.018128412 | 0.031713678 | 0.009602047 |
| Sample 88 | 0.012544828 | -0.032316871 | 0.030779541 | 0.01789803 | 0.015911561 |
| Sample 89 | 0.017591942 | -0.010695674 | 0.049979279 | 0.019481634 | 0.018740527 |
| Sample 90 | 0.00792899 | -0.026531261 | 0.050746326 | 0.030506038 | 0.046640276 |
| Sample 91 | 0.006788566 | 0.000625899 | 0.016998458 | 0.012187333 | 0.012237432 |
| Sample 92 | 0.017640459 | -0.022833393 | 0.039065301 | 0.039464208 | 0.023151888 |
| Sample 93 | 0.017480751 | 0.001540238 | 0.03240418 | 0.006524059 | -0.002915535 |
| Sample 94 | 0.008561695 | -0.000499195 | 0.021798513 | 0.01183394 | 0.012734704 |
| Sample 95 | -0.002711523 | 0.004036611 | 0.027540693 | 0.043111612 | 0.019805727 |
| Sample 96 | 0.038748047 | -0.023345053 | 0.021570564 | 0.019092499 | 0.025435867 |
| Sample 97 | 0.013461112 | -0.00940678 | 0.013814955 | 0.020132833 | 0.021961368 |
| Sample 98 | 0.010567342 | -0.008596601 | 0.027322627 | 0.020188201 | 0.010033534 |
| Sample 99 | 0.028333499 | -0.036707771 | 0.040128465 | 0.020698191 | 0.036609144 |
| Sample 100 | 0.021201298 | -0.009472741 | 0.014547831 | 0.0415932 | 0.014864034 |
| Sample 101 | 0.004449114 | -0.0080771 | 0.011665901 | 0.024070689 | 0.000367621 |
| Sample 102 | 0.003243325 | -0.000675944 | 0.001033725 | 0.018991754 | 0.000366385 |
| Sample 103 | 0.000583483 | -0.004394112 | 0.019808797 | 0.01090801 | 0.006124331 |
| Sample 104 | 0.001483484 | -0.000477947 | 0.004386668 | 0.008071528 | 0.008052785 |
| Sample 105 | 0.052357614 | -0.03922248 | 0.0162964 | 0.05035984 | 0.038370106 |
| Sample 106 | 0.025228267 | -0.022795257 | 0.047621836 | 0.020747047 | 0.027780585 |
| Sample 107 | 0.018515316 | -0.026207549 | 0.046357642 | 0.043431448 | 0.027761535 |
| Sample 108 | 0.037247914 | -0.033060486 | 0.036697203 | 0.042703868 | 0.046550067 |
| Sample 109 | 0.01166285 | -0.007939864 | 0.033103423 | 0.019165937 | 0.018887327 |

| Bootstrapped Samples | a*b for CS Construct | a*b for CVC Construct | a*b for EH Construct | a*b for HSGS Construct | a*b for PSF Construct |
|---|---|---|---|---|---|
| Sample 110 | 0.020144265 | -0.011710808 | 0.02355724 | 0.037514337 | 0.026706105 |
| Sample 111 | 0.004056753 | -0.017917762 | 0.040138823 | 0.03858923 | 0.027239395 |
| Sample 112 | -0.021223834 | -0.012320869 | 0.03548922 | 0.01036314 | 0.037377469 |
| Sample 113 | 0.016692342 | -0.009378802 | 0.023768032 | 0.029941543 | 0.008548429 |
| Sample 114 | 0.004571581 | -0.015331127 | 0.024189665 | 0.014144742 | 0.024341569 |
| Sample 115 | 0.015015952 | -0.01312079 | 0.030159553 | 0.033453377 | 0.022840624 |
| Sample 116 | 0.041804442 | -0.03626492 | 0.022104186 | 0.015928995 | 0.037830552 |
| Sample 117 | 0.047233369 | -0.024106256 | 0.045675765 | 0.051406151 | 0.034020707 |
| Sample 118 | 0.024375326 | -0.016335635 | 0.022409297 | 0.022311448 | 0.042900013 |
| Sample 119 | 0.027182374 | -0.038392424 | 0.046273156 | 0.054168242 | 0.079532169 |
| Sample 120 | 0.034428968 | -0.046297338 | 0.087106393 | 0.01997747 | 0.062097905 |
| Sample 121 | 0.017177397 | -0.018417464 | 0.036282389 | 0.027190664 | 0.016191182 |
| Sample 122 | 0.001577554 | 0.00169853 | 0.008326495 | 0.007691601 | 0.006942736 |
| Sample 123 | 0.059018718 | -0.028459773 | 0.064839746 | 0.032803819 | 0.032866096 |
| Sample 124 | 0.021242759 | -0.014919359 | 0.022399309 | 0.01983593 | 0.022904654 |
| Sample 125 | 0.005635611 | -0.002491089 | 0.025250558 | 0.02845434 | 0.024794136 |
| Sample 126 | 0.015800226 | -0.019250776 | 0.024546499 | 0.030722371 | 0.013597789 |
| Sample 127 | 0.032889601 | -0.036007993 | 0.03927379 | 0.022231799 | 0.03210326 |
| Sample 128 | 0.013961733 | -0.011721336 | 0.029719527 | 0.041158685 | 0.016957639 |
| Sample 129 | 0.001752282 | -0.004907118 | 0.014070758 | 0.010004548 | 0.013196873 |
| Sample 130 | 0.026826788 | -0.035795707 | 0.049115124 | 0.005572623 | 0.066301366 |
| Sample 131 | 0.011208501 | -0.01141844 | 0.037714782 | 0.048961052 | 0.041730934 |
| Sample 132 | 0.036071906 | -0.03553895 | 0.053322056 | 0.051636929 | 0.026564045 |
| Sample 133 | 0.023614566 | -0.008133683 | 0.022151271 | 0.019371757 | 0.027885868 |
| Sample 134 | 0.023118305 | -0.01714358 | 0.012526608 | 0.031326566 | 0.026708713 |
| Sample 135 | 0.025247012 | -0.02165901 | 0.039403236 | 0.007596443 | 0.020324902 |
| Sample 136 | 0.031761153 | -0.029391018 | 0.037394117 | 0.018202495 | 0.036765165 |
| Sample 137 | 0.032819235 | -0.030327633 | 0.059918856 | 0.014499058 | 0.017788022 |
| Sample 138 | 0.016479921 | -0.024548098 | 0.043955968 | 0.017300711 | 0.042092996 |
| Sample 139 | 0.009346342 | -0.013568316 | 0.01752466 | 0.032472012 | 0.038826475 |
| Sample 140 | 0.006095529 | -0.008401459 | 0.013625631 | 0.023400252 | 0.007696408 |

| Bootstrapped Samples | a*b for CS Construct | a*b for CVC Construct | a*b for EH Construct | a*b for HSGS Construct | a*b for PSF Construct |
|---|---|---|---|---|---|
| Sample 141 | 0.05943421 | -0.033014361 | 0.050882468 | 0.039006375 | 0.04967305 |
| Sample 142 | 0.021117372 | -0.0255418 | 0.042005394 | 0.017516731 | 0.025408089 |
| Sample 143 | 0.001602575 | -0.002969692 | 0.021145912 | 0.028514625 | 0.03258305 |
| Sample 144 | 0.002258935 | -0.017091615 | 0.057919861 | 0.031935061 | 0.020541455 |
| Sample 145 | 0.019544199 | -0.042170687 | 0.04190763 | 0.027291305 | 0.056482569 |
| Sample 146 | 0.004428826 | -0.009838975 | 0.030527594 | 0.018741676 | 0.015516078 |
| Sample 147 | 0.017667216 | -0.016013392 | 0.033310304 | 0.005504527 | 0.020354537 |
| Sample 148 | 0.003346091 | -0.011507686 | 0.013256315 | 0.021317475 | 0.019493456 |
| Sample 149 | 0.012670761 | -0.007388832 | 0.015455029 | 0.022317281 | 0.046637315 |
| Sample 150 | 0.064462204 | -0.039410548 | 0.041757548 | 0.034973165 | 0.052710587 |
| Sample 151 | -0.004395302 | -0.007111016 | 0.027302744 | 0.010393029 | 0.002599113 |
| Sample 152 | 0.009544796 | -0.029632321 | 0.047148741 | 0.046117526 | 0.024006216 |
| Sample 153 | 0.016335336 | -0.013216082 | 0.030471733 | 0.017909503 | 0.016935489 |
| Sample 154 | 0.00484515 | -0.00288755 | 0.015182114 | 0.007600047 | 0.02876762 |
| Sample 155 | 0.025706154 | -0.02507472 | 0.045328018 | 0.03728397 | 0.036277622 |
| Sample 156 | 0.022370506 | -0.005576791 | 0.038286128 | 0.021273233 | 0.024526495 |
| Sample 157 | 0.017779729 | -0.016856059 | 0.026224452 | 0.033795396 | 0.033565035 |
| Sample 158 | 0.008680524 | -0.004319547 | 0.00710801 | 0.005483362 | 0.008919232 |
| Sample 159 | 0.006800987 | -0.006054668 | 0.018108301 | 0.016691017 | 0.010234321 |
| Sample 160 | 0.006052723 | -0.002509118 | 0.017771236 | 0.017424238 | 0.012178099 |
| Sample 161 | 0.005428326 | -0.002151776 | 0.02253313 | 0.027214086 | 0.014042629 |
| Sample 162 | 0.014281395 | -0.022780171 | 0.0290044 | 0.035888694 | 0.018324492 |
| Sample 163 | 0.026032378 | -0.030368469 | 0.045303858 | 0.028169544 | 0.026547444 |
| Sample 164 | 0.056288692 | -0.037728251 | 0.07197142 | 0.007260655 | 0.054072762 |
| Sample 165 | 0.013735088 | 0.0105058 | 0.028325452 | 0.030239376 | 0.02229229 |
| Sample 166 | -0.003072983 | -0.010351899 | 0.015770253 | 0.051489136 | 0.033969539 |
| Sample 167 | 0.015801338 | -0.025849157 | 0.029300513 | 0.038409648 | 0.01528775 |
| Sample 168 | -0.027716808 | -0.065809153 | 0.070612214 | 0.046929604 | 0.041553334 |
| Sample 169 | 0.020716553 | -0.007820229 | 0.01712165 | 0.039989442 | 0.046532471 |
| Sample 170 | 0.02284354 | -0.0077248 | 0.02347732 | 0.052772745 | 0.021625808 |
| Sample 171 | 0.008818663 | -0.011346676 | 0.035715522 | 0.022626576 | 0.02764615 |

| Bootstrapped Samples | a*b for CS Construct | a*b for CVC Construct | a*b for EH Construct | a*b for HSGS Construct | a*b for PSF Construct |
|---|---|---|---|---|---|
| Sample 172 | -0.005894132 | -0.001752407 | 0.023350992 | 0.019791328 | -0.001457588 |
| Sample 173 | -0.014631864 | -0.010007642 | 0.035083349 | 0.011657709 | 0.018570463 |
| Sample 174 | 0.029642367 | -0.026073501 | 0.050326347 | 0.012475004 | 0.034129263 |
| Sample 175 | 0.025483065 | -0.033072637 | 0.041818813 | 0.067972979 | 0.030938612 |
| Sample 176 | 0.022749623 | 0.003052078 | 0.012212119 | 0.026211753 | 0.020618178 |
| Sample 177 | 0.012638016 | -0.023834988 | 0.035909102 | 0.025378594 | 0.032883168 |
| Sample 178 | 0.009615355 | -0.015914308 | 0.021913767 | 0.028714611 | 0.027500502 |
| Sample 179 | -0.006987651 | 0.003123936 | 0.037901209 | 0.010603447 | 0.015343927 |
| Sample 180 | 0.016100063 | -0.017445687 | 0.026220415 | 0.006431111 | 0.040124357 |
| Sample 181 | 0.02071534 | -0.019525465 | 0.018764968 | 0.031157325 | 0.036384708 |
| Sample 182 | -0.000755095 | -0.022871712 | 0.062598541 | 0.028140725 | 0.024472456 |
| Sample 183 | 0.030784393 | -0.019087094 | 0.054846079 | 0.028748406 | 0.036526224 |
| Sample 184 | 0.004202919 | -0.005017297 | 0.054879811 | 0.016088638 | 0.027566569 |
| Sample 185 | 0.003968462 | -0.000254183 | 0.01829673 | 0.010075425 | 0.021556998 |
| Sample 186 | 0.000211856 | -0.004747158 | 0.020671214 | 0.024493877 | 0.01776006 |
| Sample 187 | 0.003166428 | -0.007654499 | 0.02234277 | 0.026212472 | 0.026938299 |
| Sample 188 | 0.025492318 | -0.007703938 | 0.013751099 | 0.028142709 | 0.011861588 |
| Sample 189 | 0.001570834 | -0.001955425 | 0.008794089 | 0.010346171 | 0.004357885 |
| Sample 190 | 0.008357075 | -0.010912184 | 0.041024699 | 0.019631051 | 0.017061106 |
| Sample 191 | 0.018216587 | -0.017564965 | 0.02397794 | 0.004802247 | 0.038364676 |
| Sample 192 | -0.006380178 | -0.000333716 | 0.031393658 | 0.028179508 | 0.012557187 |
| Sample 193 | 0.009919455 | -0.012550207 | 0.027249863 | 0.02062423 | 0.005317514 |
| Sample 194 | 0.016865846 | -0.019675075 | 0.061674169 | 0.016031595 | 0.011154559 |
| Sample 195 | 0.005324835 | -0.014403108 | 0.04517348 | 0.018848285 | 0.020081216 |
| Sample 196 | 0.007904353 | -0.009930457 | 0.010753509 | 0.026618111 | 0.029081689 |
| Sample 197 | 1.39154E-05 | 0.002201518 | 0.034784427 | 0.019158112 | 0.024745993 |
| Sample 198 | 0.004993258 | -0.010647112 | 0.02649254 | 0.018583174 | 0.013989143 |
| Sample 199 | 0.028669494 | -0.018263954 | 0.011042994 | 0.021909262 | 0.056538657 |
| Sample 200 | 0.035608755 | -0.018993156 | 0.043269408 | 0.021962031 | 0.073052343 |
| Sample 201 | 0.014325056 | -0.009831048 | 0.03535135 | 0.007563725 | 0.033447179 |
| Sample 202 | 0.018117227 | -0.008290934 | 0.022778745 | 0.015959196 | 0.017222905 |

| Bootstrapped Samples | a*b for CS Construct | a*b for CVC Construct | a*b for EH Construct | a*b for HSGS Construct | a*b for PSF Construct |
|---|---|---|---|---|---|
| Sample 203 | 0.033615413 | -0.018198208 | 0.032744205 | 0.048875813 | 0.002617414 |
| Sample 204 | 0.028502836 | -0.027404478 | 0.053971201 | 0.058238602 | 0.040674589 |
| Sample 205 | 0.013936671 | 0.00482189 | 0.032864587 | 0.010661362 | 0.007281969 |
| Sample 206 | 0.008247065 | -0.006428305 | 0.024661904 | 0.007771922 | 0.01477518 |
| Sample 207 | 0.022638921 | 0.003042946 | 0.040459537 | 0.035654896 | 0.015535315 |
| Sample 208 | 0.010260155 | -0.018097244 | 0.055151448 | 0.030925966 | 0.031351259 |
| Sample 209 | 0.009073246 | -0.001368185 | 0.011553815 | 0.016153721 | 0.004277962 |
| Sample 210 | 0.021153138 | -0.002926452 | 0.042890514 | 0.018119073 | 0.017750238 |
| Sample 211 | 0.038093669 | -0.03037943 | 0.024610838 | 0.016960542 | 0.031443385 |
| Sample 212 | 0.03038543 | -0.026595691 | 0.041475104 | 0.008139749 | 0.029228338 |
| Sample 213 | 0.022340908 | -0.019038464 | 0.033708405 | 0.037031114 | 0.024314617 |
| Sample 214 | 0.025626404 | -0.015603095 | 0.008757761 | 0.018160049 | 0.029771394 |
| Sample 215 | 0.006057288 | -0.009477882 | 0.051173125 | 0.049138889 | 0.000783901 |
| Sample 216 | 0.016934591 | -0.016600751 | 0.004110244 | 0.023805431 | 0.044211468 |
| Sample 217 | 0.002552437 | -0.005144535 | 0.016165273 | 0.024622691 | 0.009406496 |
| Sample 218 | 0.017380753 | -0.013831899 | 0.057436434 | 0.019548005 | 0.04289969 |
| Sample 219 | 0.008993946 | -0.010206741 | 0.017671756 | 0.031392291 | 0.015284003 |
| Sample 220 | 0.008350403 | -0.01907376 | 0.009714092 | 0.022402048 | 0.005354565 |
| Sample 221 | 0.015653379 | -0.025523523 | 0.0343689 | 0.013171815 | 0.020799045 |
| Sample 222 | 0.012837951 | -0.022227856 | 0.034352875 | 0.012937779 | 0.019634469 |
| Sample 223 | 0.006941351 | -0.003037317 | 0.04632503 | 0.033596999 | 0.016389978 |
| Sample 224 | 0.010029945 | -0.016053384 | 0.031906309 | 0.025651993 | 0.00093218 |
| Sample 225 | 0.015949175 | -0.009299498 | 0.037059153 | 0.007930121 | 0.03847619 |
| Sample 226 | -0.000496565 | -0.012161187 | 0.042801708 | 0.038235645 | 0.016137421 |
| Sample 227 | 0.020546468 | -0.038502368 | 0.043255739 | 0.018919666 | 0.037975926 |
| Sample 228 | -0.002764912 | -0.029217967 | 0.035141 | 0.052140875 | 0.02614432 |
| Sample 229 | 0.008051679 | -0.021761067 | 0.015316716 | 0.027505873 | 0.031180196 |
| Sample 230 | 0.014042747 | -0.02306897 | 0.021313187 | 0.023864577 | 0.019464224 |
| Sample 231 | 0.026843134 | -0.015198069 | 0.03333697 | 0.013078949 | 0.035592786 |
| Sample 232 | 0.044900147 | -0.039456304 | 0.038075165 | 0.043310082 | 0.033622774 |
| Sample 233 | 0.008231247 | -0.024167903 | 0.052346749 | 0.022262548 | 0.013227935 |

| Bootstrapped Samples | a*b for CS Construct | a*b for CVC Construct | a*b for EH Construct | a*b for HSGS Construct | a*b for PSF Construct |
|---|---|---|---|---|---|
| Sample 234 | -0.029781467 | -0.002105372 | 0.041520035 | 0.017166759 | 0.014436459 |
| Sample 235 | -0.006260578 | -0.003082427 | 0.054332164 | 0.012572373 | 0.026610634 |
| Sample 236 | 0.033752483 | -0.040501016 | 0.062578151 | 0.034246966 | 0.016750968 |
| Sample 237 | 0.011879382 | -0.028601666 | 0.058069625 | 0.029502244 | 0.043823277 |
| Sample 238 | 0.024503333 | -0.044728334 | 0.044887925 | 0.047613894 | 0.033675395 |
| Sample 239 | -0.003870622 | -0.012135159 | 0.023306613 | 0.015124245 | 0.013290219 |
| Sample 240 | 0.014100961 | -0.022915816 | 0.031067584 | 0.039208826 | 0.026256164 |
| Sample 241 | -0.002889573 | -0.005845617 | 0.044918407 | 0.032970952 | 0.030066385 |
| Sample 242 | 0.009538086 | -0.014795701 | 0.022927757 | 0.019187756 | 0.02207952 |
| Sample 243 | 0.042394062 | -0.031968442 | 0.038356718 | 0.017498097 | 0.045306584 |
| Sample 244 | 0.032194829 | -0.016274252 | 0.039867708 | 0.033084963 | 0.043443781 |
| Sample 245 | 0.013041798 | -0.007552296 | 0.028064378 | 0.011059632 | 0.029140705 |
| Sample 246 | 0.022593428 | -0.019045525 | 0.037784685 | 0.044441884 | 0.010163034 |
| Sample 247 | 0.005778314 | -0.009515251 | 0.016754527 | 0.020261583 | 0.058417916 |
| Sample 248 | 0.001226944 | -0.011306547 | 0.039205961 | 0.025709003 | 0.004796036 |
| Sample 249 | 0.007483853 | -0.028056347 | 0.050343252 | 0.030613503 | 0.024915561 |
| Sample 250 | -0.002811541 | -0.013685433 | 0.030010893 | 0.024665035 | 0.022320358 |
| Sample 251 | -0.014500076 | -0.018629198 | 0.027395549 | 0.011457034 | 0.041859412 |
| Sample 252 | 0.010687729 | -0.008433121 | 0.015963711 | 0.042598282 | 0.009320421 |
| Sample 253 | 0.042407514 | -0.041170832 | 0.070544203 | 0.050783023 | 0.050737589 |
| Sample 254 | 0.00023565 | 0.002389125 | 0.012641328 | 0.013139134 | 0.002946649 |
| Sample 255 | 0.015897892 | -0.030358776 | 0.058543696 | 0.030920415 | 0.025978268 |
| Sample 256 | 0.000978287 | -0.014747313 | 0.045665652 | 0.034090256 | 0.008224139 |
| Sample 257 | 0.02870862 | -0.038384731 | 0.053474536 | 0.053528511 | 0.022126344 |
| Sample 258 | -0.004910148 | -0.003660701 | 0.018030558 | 0.02442376 | 0.027881384 |
| Sample 259 | 0.032311567 | -0.015228268 | 0.041099631 | 0.02256061 | 0.043468408 |
| Sample 260 | 0.006830932 | -0.00504809 | 0.010865447 | 0.018512716 | 0.018279551 |
| Sample 261 | 0.013140501 | -0.021983902 | 0.026085161 | 0.020577798 | 0.026120648 |
| Sample 262 | 0.01446762 | -0.032456774 | 0.04354524 | 0.044645058 | 0.015541494 |
| Sample 263 | 0.003014343 | -0.005065117 | 0.060182967 | 0.007016462 | 0.006094786 |
| Sample 264 | -0.008977743 | -0.011175847 | 0.036217277 | 0.016733102 | 0.047350094 |

| Bootstrapped Samples | a*b for CS Construct | a*b for CVC Construct | a*b for EH Construct | a*b for HSGS Construct | a*b for PSF Construct |
|---|---|---|---|---|---|
| Sample 265 | 0.016789307 | -0.011156516 | 0.01399196 | 0.043208187 | 0.015017807 |
| Sample 266 | 0.014226467 | -0.032506627 | 0.01683219 | 0.023342486 | 0.039396553 |
| Sample 267 | 0.020267729 | -0.005300102 | 0.007838329 | 0.024363633 | 0.025651717 |
| Sample 268 | 0.001886071 | -0.013534777 | 0.051221365 | 0.059251287 | 0.00021293 |
| Sample 269 | 0.015081866 | -0.00624358 | 0.0184641 | 0.056226961 | 0.021054159 |
| Sample 270 | 0.011635819 | -0.011779717 | 0.021415178 | 0.006102911 | 0.01312683 |
| Sample 271 | 0.038968534 | -0.026903928 | 0.032291478 | 0.031180766 | 0.024971216 |
| Sample 272 | 0.003481271 | -0.006997246 | 0.021410338 | 0.020980507 | 0.028151557 |
| Sample 273 | 0.017836225 | -0.019136152 | 0.023178142 | 0.030354031 | 0.017798631 |
| Sample 274 | -0.002988886 | -0.003130399 | 0.045750973 | 0.014347891 | 0.008201137 |
| Sample 275 | 0.015275007 | 0.001524199 | 0.039170875 | 0.025031205 | 0.000646974 |
| Sample 276 | 0.012218812 | -0.014755682 | 0.027881873 | 0.021114104 | 0.01374292 |
| Sample 277 | 0.034455182 | -0.032963298 | 0.053787395 | 0.039067472 | 0.040978978 |
| Sample 278 | 0.009845068 | -0.016276931 | 0.025961054 | 0.012321293 | 0.014620127 |
| Sample 279 | -0.038613815 | -0.026025908 | 0.064698845 | 0.04921517 | 0.024686049 |
| Sample 280 | 0.011768022 | -0.018552374 | 0.023715174 | 0.042473125 | 0.009472692 |
| Sample 281 | -0.000867652 | -0.005813664 | 0.021689189 | 0.008347326 | 0.00855725 |
| Sample 282 | 0.011724553 | -0.046784815 | 0.080400339 | 0.007419799 | 0.021341402 |
| Sample 283 | 0.022865466 | -0.004751742 | 0.04991813 | 0.039492153 | 0.024932137 |
| Sample 284 | 0.037346524 | -0.041634906 | 0.062810544 | 0.043528084 | 0.040029654 |
| Sample 285 | 0.039279878 | -0.013132163 | 0.03833344 | 0.014116114 | 0.056460842 |
| Sample 286 | 0.020461807 | -0.000285587 | 0.023775892 | 0.01547498 | 0.020974222 |
| Sample 287 | 0.010261343 | -0.012215719 | 0.008730806 | 0.028644318 | 0.0147639 |
| Sample 288 | 0.009079522 | -0.02682621 | 0.03054059 | 0.02663361 | 0.03349094 |
| Sample 289 | 0.002202907 | -0.002944563 | 0.010421444 | 0.008598496 | 0.002194705 |
| Sample 290 | 0.037804662 | -0.030454986 | 0.036190824 | 0.019217131 | 0.046087196 |
| Sample 291 | 0.015278481 | -0.02957348 | 0.031754861 | 0.039784019 | 0.062402388 |
| Sample 292 | 0.000819037 | -0.005984491 | 0.018184446 | 0.010774682 | 0.007950582 |
| Sample 293 | 0.007963971 | -0.014739399 | 0.02512271 | 0.019103299 | 0.027292831 |
| Sample 294 | 0.000953389 | 1.75573E-05 | 0.025209354 | 0.024013132 | 0.014342401 |
| Sample 295 | 0.047429235 | -0.032920625 | 0.052185135 | 0.051338439 | 0.008418875 |

| Bootstrapped Samples | a*b for CS Construct | a*b for CVC Construct | a*b for EH Construct | a*b for HSGS Construct | a*b for PSF Construct |
|---|---|---|---|---|---|
| Sample 296 | 0.029642811 | -0.026829434 | 0.038623991 | 0.036155929 | 0.024554543 |
| Sample 297 | 0.003692093 | -0.010661073 | 0.026171116 | 0.009248278 | 0.01789396 |
| Sample 298 | -0.001298475 | -0.018955878 | 0.057129862 | 0.049682667 | 0.002790219 |
| Sample 299 | 0.018648923 | -0.005950108 | 0.053150735 | 0.040897907 | 0.007388128 |
| Sample 300 | 0.022019088 | -0.02058112 | 0.04530295 | 0.020963063 | 0.027441983 |
| Sample 301 | 0.033037827 | -0.021746333 | 0.031679065 | 0.02859441 | 0.014317133 |
| Sample 302 | 0.015389106 | -0.018370631 | 0.020365143 | 0.025675133 | 0.045739962 |
| Sample 303 | 0.024478878 | -0.022281435 | 0.037470548 | 0.010764758 | 0.02087931 |
| Sample 304 | 0.034089188 | -0.017921328 | 0.031155461 | 0.048375824 | 0.015499046 |
| Sample 305 | 0.025957112 | -0.015406968 | 0.019755692 | 0.026533187 | 0.038982837 |
| Sample 306 | -6.54965E-05 | -0.014510008 | 0.031499797 | 0.01471854 | 0.040163293 |
| Sample 307 | 0.025455382 | -0.019525611 | 0.018091214 | 0.02930166 | 0.035060616 |
| Sample 308 | 0.019387912 | -0.024207528 | 0.037603608 | 0.063333005 | -0.000262487 |
| Sample 309 | 0.005049918 | -0.010728032 | 0.008652864 | 0.015571029 | 0.007846585 |
| Sample 310 | 0.00574533 | -0.001861636 | 0.010192391 | 0.027671236 | 0.01421951 |
| Sample 311 | 0.018382273 | -0.003698372 | 0.008112948 | 0.012005207 | 0.015172832 |
| Sample 312 | 0.022722355 | -0.017356953 | 0.03004892 | 0.048482511 | 0.020378744 |
| Sample 313 | 0.02721886 | -0.020960433 | 0.037662955 | 0.027133626 | 0.027131658 |
| Sample 314 | 0.011786502 | -0.023766559 | 0.042187571 | 0.03648558 | 0.016349564 |
| Sample 315 | 0.037542833 | -0.013445279 | 0.031131304 | 0.027556403 | 0.039103708 |
| Sample 316 | 0.016917096 | -0.028387033 | 0.045837508 | 0.041666911 | 0.023258865 |
| Sample 317 | 0.018386103 | -0.040815163 | 0.052636662 | 0.038065014 | 0.028630643 |
| Sample 318 | 0.005307341 | -0.005325284 | 0.033059184 | 0.030157561 | -0.004719178 |
| Sample 319 | 0.004382215 | -0.005359412 | 0.009393265 | 0.018983221 | 0.020823498 |
| Sample 320 | 0.031558545 | -0.0171424 | 0.017250305 | 0.019807547 | 0.028354326 |
| Sample 321 | 0.005316887 | -0.016291719 | 0.014313664 | 0.012296936 | 0.021205011 |
| Sample 322 | 0.015904003 | -0.0248564 | 0.041382695 | 0.027506034 | 0.04007377 |
| Sample 323 | 0.015139206 | -0.025107029 | 0.021402131 | 0.025751331 | 0.039976877 |
| Sample 324 | 0.018403176 | -0.009517744 | 0.032322879 | 0.025261002 | 0.020663656 |
| Sample 325 | 0.018704473 | -0.016436622 | 0.032653498 | 0.014476868 | 0.024210748 |
| Sample 326 | 0.014972142 | -0.020658237 | 0.040499859 | 0.026607756 | 0.019730809 |

| Bootstrapped Samples | a*b for CS Construct | a*b for CVC Construct | a*b for EH Construct | a*b for HSGS Construct | a*b for PSF Construct |
|---|---|---|---|---|---|
| Sample 327 | 0.035120501 | -0.024703726 | 0.030511605 | 0.02193797 | 0.035528461 |
| Sample 328 | 0.012100724 | -0.016379951 | 0.025238776 | 0.00483741 | 0.015799901 |
| Sample 329 | 0.020595492 | -0.010445113 | 0.08013752 | 0.062327373 | 0.008517752 |
| Sample 330 | 0.021303065 | -0.030666925 | 0.018628953 | 0.051799118 | 0.016722098 |
| Sample 331 | 0.050453433 | -0.042576876 | 0.021031404 | 0.07767169 | 0.022542188 |
| Sample 332 | -0.002656279 | -0.004822578 | 0.034690847 | 0.025723876 | 0.048685473 |
| Sample 333 | 0.04926416 | -0.028182218 | 0.011321947 | 0.048779991 | 0.053725655 |
| Sample 334 | 0.035128038 | -0.014202783 | 0.006142894 | 0.032638805 | 0.03398601 |
| Sample 335 | 0.00065522 | -0.006748583 | 0.021413269 | 0.012416087 | 0.019494841 |
| Sample 336 | 0.022698832 | -0.0152984 | 0.027177183 | 0.007636135 | 0.031197281 |
| Sample 337 | 0.021302089 | -0.008529453 | 0.039821669 | 0.03016371 | 0.039584569 |
| Sample 338 | 0.005104425 | -0.008440311 | 0.048759233 | 0.044737661 | 0.022913659 |
| Sample 339 | 0.010978441 | -0.007841689 | 0.027813975 | 0.041382629 | 0.021534393 |
| Sample 340 | 0.013531028 | -0.001198091 | 0.014127107 | 0.008135467 | 0.01666232 |
| Sample 341 | 0.015759737 | -0.024821673 | 0.033698817 | 0.028466626 | 0.015248764 |
| Sample 342 | 0.023165098 | -0.00927713 | 0.020470742 | 0.041197599 | 0.034766512 |
| Sample 343 | 0.008798184 | -0.013745609 | 0.019921462 | 0.037576717 | 0.030586465 |
| Sample 344 | 0.019226143 | -0.025518021 | 0.041082383 | 0.017871821 | 0.033291122 |
| Sample 345 | 0.007046799 | -0.011972909 | 0.033000049 | 0.029790594 | 0.014657231 |
| Sample 346 | 0.031796547 | -0.041795204 | 0.060108206 | 0.011523723 | 0.057241747 |
| Sample 347 | 0.001608124 | 0.004744184 | 0.06050469 | 0.037843432 | 0.0240286 |
| Sample 348 | 0.02702033 | -0.023730874 | 0.040385696 | 0.035377421 | 0.050132726 |
| Sample 349 | 0.008163014 | -0.006027654 | 0.032831784 | -0.004894174 | 0.064239929 |
| Sample 350 | 0.009122024 | -0.012033588 | 0.019498797 | 0.017596148 | 0.011585933 |
| Sample 351 | 0.032321786 | -0.035891579 | 0.057198794 | 0.022631793 | 0.054317124 |
| Sample 352 | 0.006589594 | -0.013112817 | 0.023709452 | 0.002677483 | 0.02231929 |
| Sample 353 | 0.036444796 | -0.037269943 | 0.013508693 | 0.046529017 | 0.023397459 |
| Sample 354 | 0.029457753 | -0.017217644 | 0.002943766 | 0.053534656 | 0.043103148 |
| Sample 355 | 0.014670463 | -0.020893385 | 0.035503588 | 0.012572469 | 0.032731149 |
| Sample 356 | 0.004698605 | 0.012979506 | 0.022239783 | 0.007006962 | 0.023622157 |
| Sample 357 | 0.005091143 | -0.010757603 | 0.02592904 | 0.02179812 | 0.022931622 |

| Bootstrapped Samples | a*b for CS Construct | a*b for CVC Construct | a*b for EH Construct | a*b for HSGS Construct | a*b for PSF Construct |
|---|---|---|---|---|---|
| Sample 358 | 0.019560897 | -0.017673773 | 0.033411366 | 0.056110012 | 0.02778612 |
| Sample 359 | 0.01436304 | -0.004049339 | 0.023267156 | 0.022150907 | 0.015999796 |
| Sample 360 | 0.010229024 | -0.013265053 | 0.041242879 | 0.005238366 | 0.016185881 |
| Sample 361 | 0.004373451 | -0.023551983 | 0.03138874 | 0.02585732 | 0.029811587 |
| Sample 362 | 0.013237823 | -0.026092894 | 0.040622468 | 0.025244767 | 0.013969215 |
| Sample 363 | 0.054679114 | -0.042245608 | 0.037382739 | 0.032258623 | 0.032130137 |
| Sample 364 | 0.024819694 | -0.039206724 | 0.045120702 | 0.041764188 | 0.038548466 |
| Sample 365 | 0.031061542 | -0.015746878 | 0.047587752 | 0.03743656 | 0.032301454 |
| Sample 366 | -0.016456045 | -0.028246497 | 0.08009768 | 0.030594034 | 0.030811297 |
| Sample 367 | 0.018935328 | -0.023655133 | 0.045512341 | 0.031985151 | 0.036155546 |
| Sample 368 | 0.016339008 | -0.017056939 | 0.022002168 | 0.02942145 | 0.04645406 |
| Sample 369 | 0.008551696 | 0.000276147 | 0.054623348 | 0.028661605 | 0.016929792 |
| Sample 370 | 0.017964735 | -0.01947968 | 0.034421679 | 0.025624052 | 0.034302036 |
| Sample 371 | 0.007677497 | -0.008076043 | 0.008467879 | 0.007968699 | 0.016397101 |
| Sample 372 | 0.005204915 | -0.010832957 | 0.046519895 | 0.022807576 | 0.001612545 |
| Sample 373 | 0.035139817 | -0.025565933 | 0.041254603 | 0.016434515 | 0.018899272 |
| Sample 374 | 0.025426971 | -0.029064557 | 0.05039575 | 0.027155656 | 0.025126952 |
| Sample 375 | 0.006302687 | -0.004451365 | 0.010457195 | 0.007303778 | 0.005994722 |
| Sample 376 | 0.003928532 | -0.001724671 | 0.005113141 | 0.004904531 | 0.004832269 |
| Sample 377 | 0.013685759 | -0.016501813 | 0.055285818 | 0.011901013 | 0.026350534 |
| Sample 378 | 0.022076644 | -0.01363754 | 0.039444967 | 0.024641088 | 0.016731981 |
| Sample 379 | -0.000364177 | -0.02209732 | 0.055837636 | 0.022261111 | 0.031179798 |
| Sample 380 | 0.010306654 | -0.009139701 | 0.007525762 | 0.021571755 | 0.011473126 |
| Sample 381 | 0.021685169 | -0.027036853 | 0.024312037 | 0.044526656 | 0.027469085 |
| Sample 382 | 0.006593232 | -0.012468072 | 0.041306238 | 0.01781838 | 0.017715475 |
| Sample 383 | 0.028213421 | -0.028793434 | 0.074563834 | 0.048456105 | 0.0416756 |
| Sample 384 | 0.030006581 | -0.027772382 | 0.040544324 | 0.03394133 | 0.02771875 |
| Sample 385 | 0.01213217 | -0.017598165 | 0.025289707 | 0.051745423 | 0.0216785 |
| Sample 386 | 0.016070591 | -0.017407393 | 0.039660107 | 0.015196019 | 0.030629685 |
| Sample 387 | 0.011746113 | 0.004655904 | 0.019753547 | 0.034174582 | 0.045470748 |
| Sample 388 | 0.022950113 | -0.020155674 | 0.020846713 | 0.027779361 | 0.01976552 |

| Bootstrapped Samples | a*b for CS Construct | a*b for CVC Construct | a*b for EH Construct | a*b for HSGS Construct | a*b for PSF Construct |
|---|---|---|---|---|---|
| Sample 389 | 0.007152123 | -0.01337253 | 0.013385126 | 0.021968013 | 0.016602313 |
| Sample 390 | 0.03832443 | -0.036861941 | 0.031346513 | 0.046804895 | 0.04312298 |
| Sample 391 | 0.005672738 | -0.014832208 | 0.025540212 | 0.037233511 | 0.018179109 |
| Sample 392 | 0.008974684 | -0.01109633 | 0.034541473 | 0.0055041 | 0.021126307 |
| Sample 393 | 0.009411978 | -0.005999018 | 0.037267394 | 0.014295251 | 0.026311109 |
| Sample 394 | 0.015880425 | -0.005974085 | 0.038242849 | 0.018883595 | 0.024275083 |
| Sample 395 | 0.021347462 | -0.018231652 | 0.03931769 | 0.001617728 | 0.0196744 |
| Sample 396 | 0.020688795 | -0.025421386 | 0.037927443 | 0.014727295 | 0.038272191 |
| Sample 397 | 0.021662028 | -0.016354154 | 0.071523481 | 0.009741353 | 0.022454925 |
| Sample 398 | 0.032060712 | -0.01979655 | 0.041691766 | 0.049857386 | 0.031185014 |
| Sample 399 | -0.004822202 | -0.003572831 | 0.026823499 | 0.017315164 | 0.012146682 |
| Sample 400 | 0.030991829 | -0.013347542 | 0.010417084 | 0.020549608 | 0.059389443 |
| Sample 401 | 0.016799472 | -0.006180905 | 0.032914397 | 0.029140265 | 0.017895339 |
| Sample 402 | 0.015914193 | -0.010867416 | 0.038411876 | 0.020336665 | 0.033399989 |
| Sample 403 | 0.03535852 | -0.007890264 | 0.026121385 | -0.000428567 | 0.040600536 |
| Sample 404 | -0.00407933 | 0.003031224 | 0.063714959 | 0.033486617 | 0.020699815 |
| Sample 405 | 0.001337411 | -0.007947497 | 0.031644979 | 0.012857434 | 0.035522408 |
| Sample 406 | 0.011853732 | -0.017492319 | 0.038675912 | 0.045913368 | 0.011382739 |
| Sample 407 | -0.006651168 | 0.000811936 | 0.02729767 | 0.034511137 | 0.001940602 |
| Sample 408 | -0.001720688 | 0.001364332 | 0.051835535 | 0.015403828 | 0.033667407 |
| Sample 409 | 0.018748948 | -0.018975254 | 0.0281172 | 0.033568164 | 0.007040979 |
| Sample 410 | 0.029811017 | -0.019234176 | 0.035386183 | 0.023193814 | 0.029365045 |
| Sample 411 | 0.000535326 | -0.00755445 | 0.055999198 | 0.014593538 | 0.020247545 |
| Sample 412 | 0.007529019 | -0.003800991 | 0.015559939 | 0.024225252 | 0.005910409 |
| Sample 413 | 0.004717406 | -0.010646836 | 0.014515956 | 0.027637068 | 0.006838165 |
| Sample 414 | 0.019208999 | -0.017903938 | 0.045333706 | 0.001301821 | 0.035951442 |
| Sample 415 | -0.005580529 | 0.023307878 | 0.033212919 | 0.018949963 | -0.007412938 |
| Sample 416 | 0.019536845 | -0.01661226 | 0.043818841 | 0.025140836 | 0.008346408 |
| Sample 417 | 0.015569319 | -0.028905755 | 0.046032155 | 0.014630991 | 0.029893504 |
| Sample 418 | 0.032058946 | -0.029184807 | 0.038661199 | 0.042184576 | 0.005759375 |
| Sample 419 | 0.032785559 | -0.017730621 | 0.030860601 | 0.037837844 | 0.032805151 |

| Bootstrapped Samples | a*b for CS Construct | a*b for CVC Construct | a*b for EH Construct | a*b for HSGS Construct | a*b for PSF Construct |
|---|---|---|---|---|---|
| Sample 420 | 0.00797951 | -0.012615053 | 0.012102332 | 0.010828798 | 0.026105279 |
| Sample 421 | -0.002080347 | -0.015562406 | 0.062641784 | 0.032813259 | 0.03099624 |
| Sample 422 | 0.026409244 | -0.027197809 | 0.039431161 | 0.043434632 | 0.013802623 |
| Sample 423 | 0.012407104 | -0.023192063 | 0.022122866 | 0.034373693 | 0.050719057 |
| Sample 424 | 0.001671558 | -0.00427281 | 0.016105241 | 0.015871025 | 0.005339601 |
| Sample 425 | 0.020128976 | -0.004584508 | 0.013053034 | 0.025169449 | 0.025902689 |
| Sample 426 | 0.019578681 | -0.019037463 | 0.02003344 | 0.012300302 | 0.010948666 |
| Sample 427 | 0.008931326 | -0.010527109 | 0.040225651 | 0.026075913 | 0.001406647 |
| Sample 428 | 0.011135125 | -0.019476121 | 0.014732017 | 0.016362763 | 0.022812854 |
| Sample 429 | 0.041917833 | -0.038063914 | 0.062148439 | 0.006303419 | 0.022681321 |
| Sample 430 | 0.020505228 | -0.01776363 | 0.042202365 | 0.040760954 | 0.032791956 |
| Sample 431 | 0.001332316 | -0.030268208 | 0.057003278 | 0.037735219 | 0.014612981 |
| Sample 432 | 0.013816469 | -0.011648596 | 0.04010404 | 0.02850748 | 0.015144251 |
| Sample 433 | 0.004213552 | -0.004022195 | 0.002588694 | 0.006315433 | 0.005625224 |
| Sample 434 | 0.026736831 | -0.028898316 | 0.009900322 | 0.049566966 | 0.038666588 |
| Sample 435 | 0.024678309 | -0.028797779 | 0.038993004 | 0.047164173 | 0.021623913 |
| Sample 436 | 0.00665543 | -0.008272596 | 0.01156704 | 0.007054507 | 0.01533095 |
| Sample 437 | -0.001976176 | -0.018389458 | 0.046356537 | 0.012682828 | 0.003342848 |
| Sample 438 | 0.023101067 | -0.02730432 | 0.033959133 | 0.0364847 | 0.032885495 |
| Sample 439 | -0.002438123 | -0.003066239 | 0.03480478 | 0.016721473 | 0.015491677 |
| Sample 440 | -0.035717149 | -0.044261133 | 0.052205967 | 0.015945823 | 0.039304318 |
| Sample 441 | 0.044564401 | -0.045534411 | 0.03947591 | 0.023245972 | 0.054100519 |
| Sample 442 | 0.027137998 | -0.037175512 | 0.038469014 | 0.035953942 | 0.035077136 |
| Sample 443 | 0.039407536 | -0.049156548 | 0.042340964 | 0.021343392 | 0.053580037 |
| Sample 444 | 0.013970462 | -0.014447276 | 0.016629371 | 0.019658233 | 0.022909442 |
| Sample 445 | 0.022858892 | -0.017919054 | 0.025660576 | 0.017432397 | 0.028955051 |
| Sample 446 | 0.024517188 | -0.003512719 | 0.020086965 | 0.027697229 | 0.037713947 |
| Sample 447 | 0.01236329 | -0.009145612 | 0.034339684 | 0.029311223 | 0.022460671 |
| Sample 448 | 0.032931816 | -0.032008053 | 0.026973651 | 0.024184142 | 0.037001542 |
| Sample 449 | 0.013421629 | -0.003319404 | 0.018495761 | 0.032310879 | 0.026472789 |
| Sample 450 | 0.006884779 | -0.010828753 | 0.013324518 | 0.005194097 | 0.014083353 |

| Bootstrapped Samples | a*b for CS Construct | a*b for CVC Construct | a*b for EH Construct | a*b for HSGS Construct | a*b for PSF Construct |
|---|---|---|---|---|---|
| Sample 451 | 0.019426831 | -0.02143764 | 0.05050976 | 0.026622135 | 0.024482907 |
| Sample 452 | 0.013198565 | 0.002563712 | 0.025902984 | 0.014452442 | 0.028889712 |
| Sample 453 | 0.022156292 | -0.011857827 | 0.021438568 | 0.016159804 | 0.031295224 |
| Sample 454 | 0.010382685 | -0.023325205 | 0.041757169 | 0.016620095 | 0.0556794 |
| Sample 455 | 0.031951038 | -0.031944241 | 0.031382385 | 0.047417735 | 0.03111505 |
| Sample 456 | 0.018532878 | -0.016426049 | 0.019641194 | 0.021161105 | 0.012394507 |
| Sample 457 | 0.009990321 | -0.021624089 | 0.022882139 | 0.041713613 | 0.018944507 |
| Sample 458 | 0.002325192 | -0.001308227 | 0.007405654 | 0.004544373 | 0.004426397 |
| Sample 459 | -0.012868084 | -0.002316805 | 0.025547435 | 0.010371455 | -0.000439445 |
| Sample 460 | 0.013441534 | -0.004094009 | 0.008741262 | 0.021730979 | 0.029315038 |
| Sample 461 | 0.020260522 | -0.011890963 | 0.041830156 | 0.069344277 | 0.021014641 |
| Sample 462 | 0.033672695 | -0.030714495 | 0.046349068 | 0.030878309 | 0.032224357 |
| Sample 463 | 0.034669149 | -0.011434794 | 0.025195749 | 0.023523011 | 0.043372612 |
| Sample 464 | 0.023612336 | -0.018615681 | 0.040058865 | 0.026845283 | 0.03025404 |
| Sample 465 | 0.005012355 | -0.004203965 | 0.009741331 | 0.004060527 | 0.008432089 |
| Sample 466 | 0.010724391 | -0.013285542 | 0.024670825 | 0.025470012 | 0.011015017 |
| Sample 467 | -0.002134885 | 0.001967433 | 0.014583926 | 0.026115433 | 0.008750336 |
| Sample 468 | 0.025256683 | -0.006381641 | 0.044938938 | 0.021225304 | 0.018065397 |
| Sample 469 | 0.015075998 | -0.008565245 | 0.018228502 | 0.032701191 | 0.027462579 |
| Sample 470 | 0.016070576 | -0.007120431 | 0.02608786 | 0.014708139 | 0.015718249 |
| Sample 471 | 0.006033386 | -0.023833041 | 0.034638273 | 0.057905732 | 0.005249068 |
| Sample 472 | 0.010537871 | -0.006765399 | 0.023897398 | 0.018220612 | 0.01700601 |
| Sample 473 | 0.0217029 | -0.020213585 | 0.037632671 | 0.011713803 | 0.025233431 |
| Sample 474 | 0.010395438 | -0.016606097 | 0.044291772 | 0.031556992 | 0.017241974 |
| Sample 475 | 0.013072706 | -0.020884194 | 0.05898209 | 0.034218731 | 0.049267318 |
| Sample 476 | 0.015578142 | -0.020421428 | 0.01767909 | 0.035401543 | 0.017110829 |
| Sample 477 | 0.020434773 | -0.022876909 | 0.024863145 | 0.036127396 | 0.021394823 |
| Sample 478 | 0.005046924 | -0.003176411 | 0.014072236 | 0.010231119 | 0.013439119 |
| Sample 479 | 0.012628307 | -0.002455432 | 0.024639295 | 0.036336864 | 0.014972459 |
| Sample 480 | 0.007407806 | -0.002747976 | 0.012842148 | 0.046091775 | 0.036840909 |
| Sample 481 | 0.026962708 | -0.020633687 | 0.023451385 | 0.01213378 | 0.04115529 |

| Bootstrapped Samples | a*b for CS Construct | a*b for CVC Construct | a*b for EH Construct | a*b for HSGS Construct | a*b for PSF Construct |
|---|---|---|---|---|---|
| Sample 482 | 0.0118774 | -0.009860386 | 0.041706462 | 0.028273583 | 0.00324708 |
| Sample 483 | 0.022216427 | -0.023724014 | 0.049785123 | 0.020986902 | 0.050214614 |
| Sample 484 | 0.004652746 | -0.013008348 | 0.017657628 | 0.016294923 | 0.056566732 |
| Sample 485 | 0.009452858 | -0.016096851 | 0.024522486 | 0.021596004 | 0.015032152 |
| Sample 486 | -0.001044244 | -0.001071749 | 0.006718644 | 0.012775437 | 0.008473855 |
| Sample 487 | 0.016163072 | -0.009678712 | 0.009322361 | 0.007428937 | 0.029541734 |
| Sample 488 | 0.010024399 | -0.034803773 | 0.033166129 | 0.044327879 | 0.04616189 |
| Sample 489 | -0.002795625 | -0.008140738 | 0.058439175 | 0.007333526 | 0.025489911 |
| Sample 490 | 0.010491228 | -0.009652347 | 0.021090899 | 0.01332368 | 0.012012352 |
| Sample 491 | 0.010356119 | -9.43373E-06 | 0.015198698 | 0.018187283 | 0.008818632 |
| Sample 492 | 0.014854023 | -0.011485539 | 0.018844245 | 0.035901755 | 0.016871072 |
| Sample 493 | 0.005741154 | -0.00664987 | 0.011509232 | 0.0205708 | 0.014170639 |
| Sample 494 | 0.017243024 | -0.005136845 | 0.035122616 | 0.032694549 | 0.027376152 |
| Sample 495 | 0.012915118 | -0.017974477 | 0.018630252 | 0.00974564 | 0.039383328 |
| Sample 496 | 0.013805148 | -0.011677353 | 0.042489122 | -0.005596942 | 0.030945689 |
| Sample 497 | 0.008440843 | 0.001815266 | 0.02844844 | 0.028275884 | -0.000669915 |
| Sample 498 | 0.004904845 | -0.004607505 | 0.015820391 | 0.006597169 | 0.021779625 |
| Sample 499 | 0.016303746 | -0.007633854 | 0.016088895 | 0.024516679 | 0.03461988 |
| **a*b =** | **0.014758268** | **-0.015971452** | **0.032322091** | **0.025590241** | **0.024405964** |
| **S =** | **0.013625164** | **0.011913052** | **0.015851369** | **0.013616708** | **0.014284655** |
| **T =** | **1.083162597** | **-1.34066837** | **2.039072464** | **1.879326511** | **1.708544167** |

**APPENDIX G: LIST OF PUBLICATIONS**

## CONFERENCE PROCEEDINGS

1. Bambale, A. J., Faridahwati, M. S., & Subramaniam, C. (2012). Mediating effect of psychological ownership on the relationship of servant leadership and organizational citizenship: a conceptual model. Paper presented at the 3$^{rd}$ Terangganu International Business and Economics Conference (TIBEC) organized by Universiti Technologi Mara Terangganu at Primula Beach Hotel, Terangganu, Malaysia, October, 18-20.

2. Bambale, A. J., Faridahwati, M. S., & Subramaniam, C. (2010): Organizational citizenship behaviors and leadership paradigms: An analysis of relationship patterns and situational influence. Paper presented at the seventh academy for global business advancement world congress held at Universiti Putra Malaysia, Malaysia, December.

3. Bambale, A. J., Faridahwati, M. S., & Subramaniam, C. (2011). Eliciting OCB through human resource management practices: Eliciting OCB through Human Resource Management Practices: Review of extant literature. Paper Presented at the 2nd International Conference on Business and Information (ICBI), University of Kelaniya, Sri Lanka, October 20-23.

4. Bambale, A. J., Faridahwati, M. S., & Subramaniam, C. (2011). Servant leadership as employee-organization approach for performance of employee citizenship behaviors in the Nigeria's electric power sector. Paper Presented at Third Annual International Conference on Global Business, Doha, Qatar December 4-6, 2011 56-76.

## JOURNAL PUBLICATIONS

1. Bambale, A. J., Faridahwati, M. S., & Subramaniam, C. (2012). Clarifying the ambiguity surrounding organizational citizenship behavior (OCB) and related behavioral constructs. *International Journal on Social Science, Economics and Arts*, 2, 1, 1-6. ISSN: 2088-5342.

2. Bambale, A. J., Faridahwati, M. S., & Subramaniam, C. (2012). Servant leadership as employee-organization approach for performance of employee citizenship behaviors in the Nigeria's electric power sector. *Journal of Marketing and Management*, 3, 1, 1-21. ISSN 2153-9715.

3. Bambale, A. J., Faridahwati, M. S., & Subramaniam, C. (2012). Mediating effect of psychological ownership on the relationship of servant leadership and organizational citizenship: a conceptual model. *Journal of Management and Science,* 2, 3, 24-28. ONLINE ISSN 2250-1819.

4. Bambale, A. J., Faridahwati, M. S., & Subramaniam, C. (2012). Investigating the effect of psychological ownership on the employee

organizational citizenship behavior (OCB): A study of Power Holding Company of Nigeria (PHCN). International Journal of Arts and Commerce, 1, 3, 275-285. ISSN: 1929-7106.

5. Bambale, A. J., Faridahwati, M. S., & Subramaniam, C. (2010). Organizational citizenship behaviors and leadership approaches: Review of relationship patterns and situational influence. *Kelaniya Journal of Human Resource Management*, 5, 1, 73-98. ISSN 1800-1793.

6. Bambale, A. J., Faridahwati, M. S., & Subramaniam, C. (2011). Stimulating organizational citizenship behavior (OCB) research for theory development: Exploration of leadership paradigms. *International Journal of Academic Research in Business and Social Sciences,* 1, Special Issue, 48-69. ISSN: 2222-6990.