Impact of Ethical Leadership on Employee Voice Behavior and Innovative Work Behavior: Role of Psychological Empowerment, Leader-Member Exchange, Job Performance and Locus of Control

Taqveem Tayyasar Zahra

Ph.D Thesis

Quaid-i-Azam School of Management Sciences

Quaid-i-Azam University

Islamabad, Pakistan

2019

Impact of Ethical Leadership on Employee Voice Behavior and Innovative Work Behavior: Role of Psychological Empowerment, Leader-Member Exchange, Job Performance and Locus of Control

Taqveem Tayyasar Zahra
(Registration ID: 03151411001)

Thesis Submitted to Quaid-i-Azam School of Management Sciences
Quaid-i-Azam University, Islamabad, Pakistan
in Partial Fulfillment of the Requirements for the Degree of

DOCTOR OF PHILOSOPHY
in
Management Sciences

2014-2019

Quaid-i-Azam School of Management Sciences
Quaid-i-Azam University, Islamabad, Pakistan

Plagiarism Undertaking

I solemnly declare that research work presented in the thesis titled "**Impact of Ethical Leadership on Employee Voice Behavior and Innovative Work Behavior: Role of Psychological Empowerment, Leader-Member Exchange, Job Performance and Locus of Control**" is solely my research work with no significant contribution from any other person. Small contribution/help wherever taken has been duly acknowledged and that complete thesis has been written by me.

I understand the zero tolerance policy of the HEC and Quaid-i-Azam University towards plagiarism. Therefore, I as an author of the above titled thesis declare that no portion of my thesis has been plagiarized and any material used as reference is properly referred/cited.

I undertake that if I am found guilty of any formal plagiarism in the above titled thesis even after award of PhD degree, the University reserves the right to withdraw/revoke my PhD degree and that HEC and the University has the right to publish my name on the HEC/University website on which names of students are placed who submitted plagiarized thesis.

Student/Author Signature: _____

Name: Taqveem Tayyasar Zahra

Author's Declaration

I **Taqveem Tayyasar Zahra** hereby state that my PhD thesis titled "Impact of Ethical Leadership on Employee Voice Behavior and Innovative Work Behavior: Role of Psychological Empowerment, Leader-Member Exchange, Job Performance and Locus of Control" is my own work and has not been submitted previously by me for taking any degree from "Quaid-i-Azam University".

Or anywhere else in the country/world.

At any time if my statement is found to be incorrect even after I graduate the University has the right to withdraw my PhD degree.

Name of Student: Taqveem Tayyasar Zahra

Date:_____

Certificate of Approval

This is to certify that the research work presented in this thesis, entitled **"Impact of ethical Leadership on Employee Voice Behavior and Innovative Work Behavior: Role of Psychological Empowerment, Leader-Member Exchange, Job Performance and Locus of Control"** was conducted by **Ms. Taqveem Tayyasar Zahra** under the supervision of **Prof. Dr Ajmal Waheed**. No part of this thesis has been submitted anywhere else for any other degree. This thesis is submitted to the Department of **School Of Management Sciences Quaid-i-Azam University, Islamabad** in partial fulfillment of the requirement for the degree of Doctor of philosophy in field of management sciences.

Department: Quaid-i-Azam School of Management Sciences

University: Quaid-i-Azam University, Islamabad

Student Name:

Ms. Taqveem Tayyasar Zahra Signature: Taqveem

Examination Committee:

a) External Examiner 1
Dr. Ather Maqsood Ahmed
Head of Economics Dept. School of Social Sciences and Humanities (S3H) H-12, NUST, Islamabad
Signature:

b) External Examiner 2
Dr. M. Anis-ul-Haque
National Institute of Psychology (NIP), Qau, Islamabad (Retired)
Signature:

Supervisor Name:

Prof.Dr. Ajmal Waheed Signature:

Name of Incharge:

Dr. Burhan Ali Shah Signature: 10/05/15

Dedicated To

AHL AL-KISA (Peace Be Upon Them All**)**

Acknowledgements

All gratitude is for **ALMIGHTY ALLAH**, the Omnipresent, the Omnipotent, the Beneficent, the Compassionate and the source of all wisdom and knowledge, **WHO** granted me the courage, strength and intellectual ability to complete this humble input towards knowledge. I am very proud of being a follower of the **Holy Prophet Hazrat Mohammad (PBUH)**, the most perfect, ideal and exalted among and of ever born on the surface of earth, Who (PBUH) declared it to be an obligatory duty of every man and woman to seek and acquire knowledge.

My heartiest thanks and sincerest gratitude to my supervisor, Dr. Ajmal Waheed, Professor, Quaid-i-Azam School of Management Sciences, for his skillful guidance, important suggestions, sound advices and valuable discussions throughout this work. I owe an immense debt of gratitude to Dr. Baiyin YANG, Professor and Chair, Department of Leadership and Organization Management, School of Economics and Management, Tsinghua University, Beijing, China, for accommodating me in his lab and for providing me a golden chance to work at his highly prestigious institution and for his motivational and scholarly guidelines he has given to me.

I am really thankful to Higher Education Commission (HEC) of Pakistan for providing me financial support to accomplish this work. I would like to express my profound gratitude to HEC for giving me a golden chance to work abroad at Tsinghua University, Beijing, China under the International Research Support Initiative Program (IRSIP).

I am also thankful to my friends for helping me in hard times, and for all the entertainment, camaraderie and support they provided. Thanks to rest of my sincere fellows and all people who contributed in any way for completion of this work.

No deeds can return and no words can express the affection, love, unceasing prayers, advices, inspiration and support that my parents, brothers and sisters infused in me throughout my academic career and my life. I feel an enormous admiration and immense obligation for my caring father and loving mother because their prayers and love is my life. May **ALMIGHTY ALLAH** bless them a healthy, long and happy life.

Taqveem Tayyasar Zahra

Abstract

This research examines the impact of ethical leadership on employee voice behavior and innovative work behavior considering psychological empowerment and leader-member exchange as mediators. Furthermore, job performance has been suggested as a moderator of ethical leadership and voice behavior relationship, whereas, locus of control has been proposed as moderator of ethical leadership and innovative work behavior relationship. Based on literature reviewed and gaps identified this study proposed a comprehensive research framework suggesting ten hypotheses.

Ten government research organizations were selected and 800 questionnaires were distributed to the targeted sample for collecting primary data for the study. Overall 546 filled questionnaires were received from which 508 were usable. Step-by-step procedures were followed to check for the validity and reliability of predeveloped scales used in this research. Validity as well as internal consistency of scales was determined via calculating item total correlations and total scale correlations using SPSS. Moreover, to further test the validity and dimensionality of predeveloped scales, respective items of all the scales were factor analyzed via confirmatory factor analysis that was carried out using AMOS. Internal consistency reliability of each scale was assessed via computing Cronbach's alpha in SPSS. Mean differences for demographic groups of respondents on study variables were examined through applying independent samples *t*-test and analysis of variance (ANOVA) test.

Bootstrap-based regressions were performed using PROCESS in SPSS to test study hypotheses. To test the mediation and moderation hypotheses, essential conditions outlined by Baron and Kenny were followed. Specifically, to test mediation hypotheses, in addition to traditional 4-step approach of Baron and Kenny, significance of indirect effect was also tested. The results indicated that ethical leadership significantly and positively relates to voice behavior, innovative work behavior, psychological empowerment and leader-member exchange. It was also found that psychological empowerment mediated the relationship between ethical leadership and the outcomes (voice behavior and innovative work behavior). Results showed that leader-member exchange only mediated the relationship between ethical leadership and voice behavior. Job performance was found to moderate ethical leadership-voice behavior relationship. However, mediating role of leader-member exchange and moderating role of locus of control in the relationship of ethical leadership and innovative work behavior was not supported. On the basis of results, study contributions, possible implications, limitations and further areas for research were also discussed. Present research has implications for policy makers who wish to identify and promote advantageous leadership practices for encouraging employee voice behavior and innovative work behavior. Moreover, this research supplemented literature for scholars focusing on outcomes of ethical leadership.

Table of Contents

List of Figures

List of Tables

List of Abbreviations Used

WLCS	Work Locus of Control Scale
SPSS	Statistical Package For The Social Sciences
AMOS	Analysis of a Moment Structures
CFA	Confirmatory Factor Analysis
GFI	Goodness of Fit Index
SRMR	Standardized Root Mean Squared Residual
AGFI	Adjusted Goodness of Fit Index
CFI	Comparative Fit Index
NFI	Normed Fit Index
RMSEA	Root Mean Squared Error of Approximation
CMB	Common Method Bias
M	Mean
SD	Standard Deviation
ANOVA	Analysis of Variance
SEM	Structural Equation Modeling
OLS	Ordinary Least Squares
CI	Confidence Interval
EL	Ethical Leadership
VB	Voice Behavior
IWB	Innovative Work Behavior
PE	Psychological Empowerment
LMX	Leader-Member Exchange
JP	Job Performance
LOC	Locus of Control
M.Phil	Master of Philosophy
Ph.D.	Doctor of Philosophy
H	Hypothesis
HR	Human Resource
SET	Social Exchange Theory

List of Appendices

Chapter One: Introduction

Background of the Study

In existing conditions the organizations are needed to rely upon new approaches and ways to be successful. One of these approaches is improvement in ethical behavior of leadership which makes work environment more expressive and productive. Therefore, ethical leadership (EL) is gaining attention and getting popularity. Ethical leadership has become point of interest for numerous academicians and scholars during the previous decade (e.g., Brown & Trevino, 2006; Walumbwa & Schaubroeck, 2009; Piccolo et al., 2010; Kalshoven et al., 2011; Yidong & Xinxin, 2013; Bai et al., 2017). Research regarding ethical leadership states that ethical character of a leader demonstrated through qualities of fairness, honesty and concern for subordinates plays substantial role for initiation and reinforcement of preferred outcomes at workplace.

Ethical leaders, as a source of inspiration for subordinates, influence their behaviors and attitudes in the benefits of individuals and organization (Walumbwa et al., 2011) motivating subordinates to contribute additional to that are the job responsibilities. However, literature is scant for understanding how extra-role desired outcomes could be motivated and attained at work along with upholding the standards of required behaviors. Literature speaks out for the need of investigations regarding direct as well as indirect effects of EL on extra-role behaviors of subordinates including voice behavior (VB) and innovative work behavior (IWB) (Morrison, 2011; Yidong & Xinxin, 2013; Hassan, 2015). However, in the existing literature fewer researches have concentrated on mechanisms through which one could capture how and for what kind of employees EL can contribute toward VB and IWB.

VB and IWB are extra-role efforts of individuals for organization (Morrison, 2011; Yidong & Xinxin, 2013). As far as, employee voice behavior is concerned, research in this area is growing rapidly over the last fifteen years (Maynes & Podsakoff, 2014). On the part of employees, choice of what and how to speak is changing while having potentially vital suggestions. However, just like other growing areas in management research, voice behavior is also somewhat fragmented (Jung, 2014) particularly in terms of potential antecedents.

Morrison (2011) proposed supervisory behavior as an important precursor to VB. Since, leaders are sources of cues for subordinates regarding safety and meaningfulness of voice, shaping their cognitions deriving decision to speak or not (Ashford et al., 2009). However, it is still vague what leaders can or cannot do to motivate employee voice behavior initiating need to focus on specific leadership styles (Morrison, 2011). To fill the literary gap this research is intended to focus on ethical leadership as antecedent to employee voice behavior. Moreover, along with voice behavior this research is also intended to investigate another relevant extra-role effort (i.e., innovative work behavior) as an outcome of ethical leadership to further highlight the motivational role which an ethical leader can play at workplace.

Resent work environment with increased complexity, competition, uncertainty and interdependence has made organizational improvements vital for success. It is a known fact that organizational improvements are based on individual's extra-role efforts in the form of IWB (Woodman et al., 1993). Management literature also necessitated in-depth study of EL and IWB relationship (Yidong & Xinxin, 2013). Thus, it is of worth exploring EL as an antecedent to both VB and IWB. However, Barling et al. (2010)

stated that investigating outcomes of leadership are not significantly important until the related mechanisms are also considered to understand how and for what kind of employees these outcomes occur. Therefore, in this research psychological empowerment (PE), leader-member exchange (LMX), locus of control (LOC) and job performance (JP) are considered for exploring how and for what kind of employees ethical leadership influence voice behavior and innovative work behavior.

In recent years, antecedents to extra-role behaviors including voice behavior and innovative work behavior are being explored at large. Yet, it is an ignored area in the developing economies like Pakistan. Particularly, ethical leader's motivational role for promoting extra-role efforts like voice behavior and innovative work behavior need special attention in the context of government sector organizations. Since, around the globe government organizations are also under increased pressure for improved efficiency and cost reduction (Hassan, 2015). Issue of concern is that how leader's behavior transmits to the subordinates. In Pakistan hierarchal decision making, lack of trust and coercive leadership practices hinder supervisors to accept and appreciate follower's input. This problem is necessary to be addressed, since, increased competition require growth for more responsive and productive organizations, initiating need for employees extra-role efforts such as VB and IWB.

Statement of Problem

Based on the background of study it becomes clear that increased competition for improved efficiency is drawing attention among management researchers to focus on desirable workplace employee behaviors. Since, organizational success is not possible until deficiencies are reported, suggestions are given and IWB is practiced by the

employees (Tushman & Nelson, 1990; Amabile et al., 1996; Ireland & Hitt, 2005; Morrison, 2011). Therefore, answering questions "how voice and innovative work behaviors could be motivated?" and "what factors determine employee engagement in such extra-role efforts and the underlying mechanisms?" has become a challenge for which numerous attempts were made (Detert & Burris, 2007; Hsiung, 2012; Raub & Robert, 2012; Yidong & Xinxin, 2013; Qi & Ming-Xia, 2014; Maynes & Podsakoff, 2014; Dhar, 2016) however the mystery is not fully resolved (Morrison, 2011; Yidong & Xinxin, 2013; Jung, 2014).

Previous research on voice behavior and innovative work behavior has focused on various personal and contextual factors as possible antecedents (e.g., Young, 2012; Takeuchi et al., 2012; Yesil & Sozbilir, 2013; Maynes & Podsakoff, 2014; Hassan, 2015; Hu & Jiang, 2016). However, role of specific leadership behaviors is still fragmented (Morrison, 2011; Yidong & Xinxin, 2013). Particularly, less consideration has been paid to EL that calls for more focused investigations (Yidong & Xinxin, 2013; Lee et al., 2017). Since, ethical leadership contributes much to employee attitudes and behaviors as well as organizational survival, effectiveness, innovation and development (Tushman & Nelson, 1990; Amabile et al., 1996; Brown et al., 2005; Ireland & Hitt, 2005; Brown & Trevino, 2006). Moreover, the need is to explore underlying mechanisms by means of which EL influence VB and IWB (Morrison, 2011; Yidong & Xinxin, 2013). Since, Barling et al. (2010) indicated that examining outcomes of leadership are of no importance until causal mechanisms are reflected to grasp how and for what kind of employees such outcomes occur.

The main problem is to understand how EL can contribute toward follower's VB and IWB. Particularly, the role of employee's PE, LMX, LOC and JP needs special attention for understanding effects of EL on VB and IWB.

By examining ethical leadership as an antecedent to voice and innovative work behaviors, incorporating role of PE, LMX, JP and LOC, this study will help managers, practitioners and management researchers to understand how and for what kind of employees leader's ethical behavior can contribute towards promoting extra-role efforts. It will also assist organizational policy makers to design more distinct policies for promoting desired behaviors and to address personal and organizational issues.

Justification of the Study

There are both literary and practical justifications for the current study. Since, less consideration has been given to ethical leadership in previous studies despite of recent trends in practice and research (Qi & Ming-Xia, 2014). Therefore, a clear need arises for a research study to investigate voice behavior and innovative work behavior focusing on ethical leadership as a potential antecedent. As, management literature on varying antecedents and determinants of voice behavior and innovative work behavior is fragmented which do not provide a clear lens to watch through (Morrison, 2011; Yidong & Xinxin, 2013; Bai et al., 2017). Whereas, ethics has gained attention worldwide in recent years to emphasize individual and corporate social responsibility (i.e., (a) employees should work in the best interest of organization beyond job responsibilities, and; (b) organizations should treat stakeholders "including employees" ethically) within and outside organizations in order to gain competitive advantage, ensure organizational success and avoid legal encounters (Ferrell et al., 2015). Therefore, ethical leadership has

become point of interest for its critical role in guiding subordinates workplace behaviors. Mayer et al. (2009) stated that worker supposed EL positively relate to extra-role behaviors (i.e., increased citizenship behavior and reduced organizational deviance).

Particularly, in current research extra-role behaviors (e.g., VB and IWB) as outcome of EL are focused as organizations are functioning in challenging times. Defies of creating sustainable worth suggest that organizations are required to be able to adapt, innovate and be flexible to respond the uncertainties and risks future poses. Therefore, extra-role participations from employees in terms of VB and IWB are required by the management, especially for information that otherwise remain hidden, for organizational innovation, for advancement of products and processes, for correcting problems before they become worsen, for making correct decisions and for implementing change to ensure organizational effectiveness and success (Woodman et al., 1993; Morrison, 2011; Qi & Ming-Xia, 2014). Therefore, it seems crucial to investigate voice behavior and innovative work behavior considering both contextual and personal factors that motivate such behaviors at workplace.

Irrespective of organizational requirements for extra-role participations, international human rights and religion inspire employees via providing autonomy to speak and innovate for organizational development. Therefore, in this study ethical leadership is also emphasized in prospects of religion and international human rights for benefit of employees and organization. Contextually, in Pakistan work ethics are bound by Islamic rules that promote consultation and diminish friction to aid in overcoming difficulties that hinder success of organization (Yousef, 2000). Therefore, reasons for

focusing ethical leadership, employee voice behavior and innovative work behavior are classical and recent efforts are just documenting and testifying the phenomenon.

This research is supplementing literature with empirical evidences that how EL motivate subordinates VB and IWB via examining role of PE and LMX. Moreover, this study also reflects for what kind of employees EL is more effective in motivating VB and IWB (as considering individual dissimilarities in terms of JP and LOC).

Research Questions

Based on this background, current study is aimed at empirically and thoroughly investigating research questions given below:

a. Does EL relate to extra-role efforts including VB and IWB?
b. Does PE and LMX mediate the relationship between EL and such extra-role behaviors?
c. Does JP moderate EL and VB relationship?
d. Does LOC moderate EL and IWB relationship?

Objectives of the Study

Considering research questions, broader objective is to examine how EL relates to VB and IWB via (a) mediation of PE and LMX; and, (b) moderation of JP and LOC. More explicit objectives are:

a. To determine the relationship among EL and both of the VB and IWB.
b. To determine mediating roles of PE and LMX in the association of EL with VB and IWB.
c. To determine moderating role of JP in the link of EL and VB.
d. To determine moderating role of LOC in the link among EL and IWB.

Key proposition of current empirical research is that EL could determine extent of extra-role efforts by employees. This research is intended to investigate ethical leadership as an important contextual factor contributing toward subordinates VB and IWB. More specifically, this research is conducted to determine how ethical practices on behalf of the leader relate to VB and IWB, considering PE and LMX as mediators. Employee's JP and LOC are also included to access the moderating role of individual's personal characteristics for ethical leadership to be effective in promoting extra-role workplace behaviors.

Significance of the Study

This research adds leadership literature via focusing on EL. Literature is scant with respect to empirical studies investigating VB, IWB, PE and LMX as outcomes of EL. More specifically, there exists very limited research that focused on employees of government organizations for studying employee extra-role behaviors. Present research fill the literary gaps via analyzing VB and IWB in the framework of EL for research scientists employed in government research organizations.

Examining voice behavior and innovative work behavior among research scientists matters as employee's constructive challenge to the status quo and innovative behavior might be vital for knowledge-intensive research projects to be successful, given that individuals' voicing of their minds, innovating new procedures and improving existing protocols is essential for long-term survival of research based organizations. In line with the existing literature results of current study offer sufficient approval to the fact that leadership ethics play significant role in determining employee engagement in extra-role efforts irrespective of public or private sector organizations.

This research tests mediation of PE and LMX in linkage of EL and extra-role efforts (VB and IWB) that are not empirically investigated in the past. Thus, via demonstrating PE and LMX as significant mediators, present research identifies new proximal antecedents of VB and IWB which can be boosted by EL.

Current study also investigates the moderation of JP. None of the previous studies examined moderation of JP in ethical leadership and voice behavior relationship. Moreover as an initial attempt, this research also tests moderating role of LOC in the link

of EL and IWB. Therefore, this empirical study has opened up new deliberations for understanding the effects of EL.

Present study substantiates the validity, confirms the factor structure and endorses the reliability of predeveloped scales (for measuring EL, VB, IWB, PE, LMX, JP and LOC) in the local organizational context of Pakistan. Most of the previous studies on ethical leadership, voice behavior and innovative work behavior were conducted using samples from private organizations. Present research is significant as in this study hypotheses are to be tested via analyzing data obtained from government organizations. Therefore, study findings are noteworthy as there are limited empirical investigations on study variables in the context of public sector organizations and in developing societies like Pakistan.

Utilizing a sample of researchers working in government research organizations, this study has practical contributions for managers of knowledgeable workforce. Thus, via investigating factors encouraging extra-role behaviors in knowledge-intensive organizations present research enrich literature on ethical leadership in an under studied context.

Scope of the Study

This research covers only government research organizations of Pakistan. Data for present empirical study is gathered from public sector research organizations because the government research organizations are bound to be following more or less similar policies (in terms of goals and management regulations) as compared to private sector organizations. Moreover, major research organizations (with an exclusive focus on agriculture, veterinary, poultry, medicine and health related research) located in federal territory and the Punjab province are considered. Institutes from all provinces are not considered as focus of this research is other than the investigation of cultural differences. Moreover, only agriculture, veterinary, poultry, medicine and health related research organizations are considered as these organizations pursue an overall similar goal of internal prosperity and stability of the nation (based on living national resources) other than military and/or industrial purposes.

There are both administrative and research staff members in government research organizations. In this study only employed researchers are considered because core institutional function (i.e. research and development) is mostly influenced by them. Moreover, irrespective of gender, the study sample includes both female and male researchers employed in the selected organizations.

The emphasis of current research is EL, VB, IWB, PE, LMX, JP and LOC. Therefore, this study is intended to help managers, practitioners and scholars to understand and/or design appropriate polices for promoting ethical leadership to motivate subordinates voice behavior and innovative work behavior at workplace.

Organization of the Study

This research is comprised of six chapters. First chapter provides background and justification of study, research objectives, statement of problem, research questions, overall scope and significance of current research.

Chapter two covers theoretical background of this research. To identify gaps in literature it offers review of relevant literature on study variables and the links between them. Based on the literature reviewed and gaps identified, a research framework along with study hypotheses to direct this research are offered in second chapter.

Chapter three entitled "Research Methodology" explains in detail the method of this research via providing operational definitions of study variables, details about respondents, data collection tool, data collection procedure and details of techniques used for analyzing primary data to test proposed study hypotheses.

Chapter four entitled "Descriptive Analysis" is about profile of respondents, validity and reliability of measures, descriptive statistics and the demographic groups' comparison on study variables.

Chapter five entitled "Hypotheses Testing" provide with the data analysis results for hypotheses testing and the main research findings. Moreover, this chapter also provides summaries of hypotheses testing results and the statistical techniques used for data analysis.

The last chapter entitled "Discussion and Conclusions" is about discussion of research findings, contributions, implications and limitations of this study, further areas for research and the study conclusion.

Chapter Summary

This chapter covered background of present study. More specifically, in the above chapter focus of study was clarified through problem statement and justification of study. Direction of this research was further defined via providing main objectives and questions. Additionally, scope and significance of empirical research were also given. The detailed structure of this study was also discussed. The next chapter will provide literature review on study variables to identify research gaps. Moreover, research framework along with study hypotheses will be proposed in the subsequent chapter to fill the existing literary gaps.

Chapter Two: A Review of Literature and Theoretical Framework

Prior chapter provided a brief background of study. This chapter facilitates understanding of study variables and their relationships as it provides with a review of relevant literature and empirical advances. Primarily, in this chapter different approaches to the definition of ethical leadership (EL) and voice behavior (VB) are reviewed for conceptualization of these variables. Then this chapter advances to review theoretical and empirical literature relating the linkage between EL and VB. In succeeding section diverse approaches to innovative work behavior (IWB) were considered for most comprehensive conceptualization and then role of EL in determining followers IWB is explicated.

The subsequent segment covers literature review about conceptualization of psychological empowerment (PE); association of EL and PE; and, mediation of PE in relationships of EL with both of the VB and IWB. The next section of chapter is about leader-member exchange (LMX) and literary support (theoretical as well as empirical) for the link between EL and LMX and, mediating role of LMX in relationships of EL with both of the VB and IWB.

Following section of chapter comprises literature review on conceptualization of job performance (JP) and moderating role of JP in EL and VB relationship to enrich understanding of proposed linkage. In later section concept of locus of control (LOC) is discussed and literary background proposing its moderating role in EL and IWB relationship is provided. Then, based on literature gaps a research framework is proposed to guide this research. Lastly, proposed hypotheses are listed and chapter is concluded with a summary.

Ethical Leadership

To understand role of ethical leadership, one needs to gain understanding of what literature suggests as ethical leadership. In this regard previous studies can be divided into three groups. First group provided narrower understanding of ethical leadership defining it as a matter of leader's personal honesty, good character, right values/beliefs, and decision making directed by inner qualities (Kanungo & Mendonca, 1996; Yukl, 2006; Freeman & Stewart, 2006; Cumbo, 2009). This group, via suggesting that directing followers to do right things is not part of ethical leadership, restricted the conceptualization to personal ethics. Hence, this group considered only one aspect of ethical leadership i.e., "moral person".

On the other hand, second group emphasized the notion of "moral manager". They agreed that ethical leadership is about serving subordinates, dealing with their internal conflicts and influencing them to do right things in the right way (Greenleaf, 1977; Frank, 2002; Heifetz, 2006). Although, in comparison with the first group of researchers this group added a different dimension but the conception of "moral person" was missing.

Third group of researchers including Trevino et al. (2003), Kaptein (2003), Brown et al. (2005), Lasthuizen (2008), De Hoogh and Den Hartog (2008), Plinio (2009) and Sandel (2009), Wang et al. (2015), Dhar (2016), Bai et al. (2017) supported most comprehensive perspective on ethical leadership via incorporating both facets of moral 'person and manager'. Most specifically, Brown et al. (2005) providing a multidimensional conceptualization defined EL as a practical exhibition of normatively suitable behavior via personal activities as well as in interpersonal relations, along with

promoting the same to subordinates through communication, decision making and reinforcements. They indicated that ethical leader being a moral person have characteristics including integrity, honesty, trustworthiness, justice, altruism and collective motivation (Brown & Trevino, 2006), and being a moral manager guide followers' behaviors and attitudes via ethical practices (Trevino & Brown, 2004). Therefore, the definition provided by Brown et al. (2005) is the most comprehensive conceptualization of the overall concept as it not only highlighted the aspects of '(a) moral person; and, (b) moral manager' but also bridged the two components via emphasizing two-way communication. Above approaches are concisely explained in the Table 2.1 below:

Table 2.1

Ethical Leadership Conceptualizations

Group	Authors	Contribution	Gaps
Group 1	Kanungo and Mendonca (1996), Yukl (2006), Freeman and Stewart (2006), Cumbo (2009)	EL is matter of leader's personal morality and virtues	Leader's role as moral manager was missing
Group 2	Greenleaf (1977), Frank (2002), Heifetz (2006)	EL is serving in and directing to the right way	Aspect of personal morality was missing
Group 3	Trevino et al. (2003), Kaptein (2003), Brown et al. (2005), Lasthuizen (2008), De Hoogh and Den Hartog (2008), Plinio (2009), Sandel (2009), Wang et al. (2015), Dhar (2016), Bai et al. (2017)	EL is demonstration of appropriate behaviors personally and promotion of same via communication, reinforcements and unbiased decision-making	The concept of EL become too widespread

From Table 2.1, it can be explained that as 'moral person' ethical leader act as salient role model having distinguished qualities to be imitated by the subordinates (Brown & Trevino, 2006; Toor & Ofori, 2009; Brown & Mitchell, 2010). Whereas, being

‘moral manager’ ethical leader is expected to (a) set performance standards with relative systems of punishments and rewards to reinforce the preferred behaviors and attitudes (Trevino et al., 2003; Brown & Trevino, 2006); (b) to promote desired behaviors via communication categorized by openness, sincerity and trust (De Hoogh & Den Hartog, 2008); and, (c) to provide support for developing subordinates personal skills (Mayer et al., 2009; Trevino et al., 2003). Thus, EL is demonstration of morally appropriate behaviors on behalf of leader that he/she also promote to subordinates whenever required for benefits of organization and workforce which mainly relates to stimulation, vision and inspirational behavior. Therefore, in the present study ethical leadership is considered as subordinate’s perception of leadership being ethical or not, based on Brown et al. (2005) conceptualization.

Considering the context of government organizations leader’s ethical virtues are deliberated as of substantial value for leadership efficiency (Hassan, 2015) as public organizations are more dedicated to protect public good. More specifically, in the context of government research organizations that work to find solutions for larger scale technological and science problems, present research argues that both aspects of EL are equally relevant in principle and practice to facilitate knowledge workers for engaging into extra-role efforts (voice behavior and innovative work behavior) that are also allied to their job tasks. Since, scientists in these institutions work in interdisciplinary and interdependent teams to accomplish personal and organizational goals. In such context of high technology work settings leadership ethics can be vital to persuade beneficial extra-role behaviors.

Generally, research relating ethical leadership asserts that ethical character of leader play significant role in encouragement of desired employee outcomes (Neubert et al., 2009; Brown et al., 2005). As, ethical leaders through their distinguished traits can change employees' perception of work and work context (Brown & Trevino, 2006), encouraging them to engage in extra-role behaviors. However, literature is deficient with respect to such motivational role of EL. Thus, current study is intended to fill this literary gap.

Voice Behavior

Studying voice behavior is important due to tremendous implications of employee workplace communications, suggestions and ideas for the organizational survival and efficiency (Morrison, 2011). There are two research streams describing voice behavior. First group conceptualized voice as employee discretionary expression of work related promotive and/or prohibitive ideas, concerns, information, suggestions or opinions to increase organizational effectiveness that might contest status quo (Van Dyne et al., 1995; Premeaux & Bedeian, 2003; Van Dyne et al., 2003; Detert & Burris, 2007; Van Dyne & LePine, 1998; Burris et al., 2008; LePine & Van Dyne, 1998; Tangirala & Ramanujam, 2008; Morrison et al., 2011; Morrison, 2011; Liang et al., 2012). Particularly, Van Dyne and LePine (1998) provided most extensively adopted conceptualization of voice being a positively intentioned promotive behavior which involves communication of positive challenge focused on necessary improvements other than the conventional criticism. Thus, the first group exclusively focused on VB as a positively intentioned constructive contest to status quo. However, voice may not be so well intentioned and might challenge status quo in a destructive manner.

Second group of scholars including Hirschman (1970), Gorden (1988), Maynes and Podsakoff (2014) demarcated voice behavior as employee's communication of both positively and/or negatively intentioned constructive and/or destructive work related challenge to the status quo. They explicitly included both positively and negatively intentioned challenges to status quo. However, as focus of current study is to investigate employee extra-role behaviors that contribute toward organizational effectiveness therefore, the conceptualization provided by Van Dyne and Lepine (1998) is considered in present study. Voice behavior conceptualizations as discussed above are briefly elucidated in Table 2.2 below:

Table 2.2

Voice Behavior Conceptualizations

Group	Authors	Contribution	Gaps
Group 1	Van Dyne et al. (1995), LePine and Van Dyne (1998), Premeaux and Bedeian (2003), Van Dyne et al. (2003), Detert and Burris (2007), Burris et al. (2008), Van Dyne and LePine (1998), Tangirala and Ramanujam (2008), Morrison et al. (2011), Morrison (2011), Liang et al. (2012)	Defined voice behavior as positively intentioned promotive or prohibitive challenge to the status quo	Limited to well-intentioned improvement focused behavior with unexplained negativity of prohibitive expression
Group 2	Hirschman (1970), Gorden (1988), Maynes and Podsakoff (2014)	Defined voice behavior as a combination of positively and/or negatively intentioned promotive and/or prohibitive challenge to the status quo	Provided a too broader conceptualization of voice that also include negative expression reducing organizational effectiveness

Table 2.2 above showed that numerous researchers have defined voice behavior differently however, there are several commonalities outlining the emergence of voice such that it is (a) an individual's openly communicated voluntary expression; (b) target sensitive behavior; (c) discretionary behavior; (d) focused on manipulating the work environment; (e) relevant to the organizational stakes; and, (f) clearly threaten an individual's position with respect to status quo since others may disagree resulting into damaged interpersonal relationships.

Ethical Leadership and Voice Behavior

Challenging the status quo often induces feelings of distress, impair interpersonal relations and harm worker image (Liu et al., 2010). Thus, voicing is an inherently risky behavior. However, numerous contextual factors, particularly leadership, significantly influence employee's decision to voice (Morrison, 2011). Since, leaders have the resources and power to change situations and policies (Detert & Burris, 2007). However, irrespective of the role that leadership can play in determining voice behavior of subordinates, empirical investigations on the topic are still insufficient (Detert & Burris, 2007; Morrison, 2011; Qi & Ming-Xia, 2014; Hassan, 2015). To fill this gap present research focused on ethical leadership to investigate its role for encouraging voice behavior of followers.

As for as ethical leadership is concerned, researchers have elucidated its influence on consequential outcomes in perspective of social learning theory (Walumbwa & Schaubroeck, 2009; Chen & Hou, 2016; Brown & Trevino, 2006; Walumbwa et al., 2011; Brown et al., 2005; Walumbwa et al., 2012; Avey et al., 2012). Since, social learning theory (Bandura, 1986) advocates that behavior of role models influence

employees learning. Ethical leaders, being the legitimate models at workplace, tend to speak out publicly for doing the right job and criticize inappropriate actions, doing so encourage followers to learn through observation and adapt the same behavior (Bandura, 1977). Moreover, ethical leaders as they are trust worthy to a greater degree and listen to employee concerns (Brown et al., 2005), provide and support conditions to speak up freely. Therefore, it can be expected that ethical bosses can encourage subordinates to voice their views. In the management literature, scholars have empirically reported that EL positively relates to subordinate's VB (Walumbwa & Schaubroeck, 2009; Chen & Hou, 2016; Avey et al., 2012; Qi & Ming-Xia, 2014; Hassan, 2015; Bai et al., 2017). Bai et al. (2017) empirically demonstrated role of EL in determining employee VB with a special focus on social learning perspective. However, applicability of these findings is limited as previous researches were mostly conducted in Chinese, American and European societies with specific cultural orientations. Whereas, cohort under study is different as in Pakistani culture hierarchal decision making, lack of trust and coercive leadership practices in government organizations hinder supervisors to encourage follower's input. Therefore, to fill literary gaps, this study also proposed that ethical leadership encourage voice behavior of subordinates.

Innovative Work Behavior

In modern dynamic settings IWB on the part of workforce is necessary for any organization's successful functioning. Therefore, studying innovative work behavior has become critical (Scott & Bruce, 1994). Based on the conceptualization of IWB literature can be separated into two groups.

First group of researchers including Van de Ven (1986), Neely and Hii (1998), Amabile (1996), Palangkaraya et al. (2010) defined IWB as a deliberate effort for either initiation or implementation of innovative ideas and procedures to benefit the organization. Even though this group provided foundations of the concept however, their conceptualization does not cover the step by step process involved in IWB.

The second group of researchers including Kanter (1988), Scott and Bruce (1994), Janssen (2000, 2005), Van der Vegt and Janssen (2003), De Jong and Den Hartog (2008) defined IWB as a complex behavior constituted of idea '(a) adoption or generation; (b) promotion; and, (c) implementation' aimed at improving organizational performance. This group distinguished three stages of IWB and argued that an individual could be anticipated to be engaged in one or more of the sequential activities at the same time. Their definition, being the most comprehensive conceptualization, combined both creativity related and implementation related aspects of employee innovative work behavior. The above conceptualizations are given in Table 2.3 below:

Table 2.3

Innovative Work Behavior Conceptualizations

Group	Authors	Contribution	Gaps
Group 1	Van de Ven (1986), Amabile (1996), Neely and Hii (1998), Palangkaraya et al. (2010)	Distinguished innovative work behavior from other behaviors via defining it as initiation, introduction or implementation of new ideas and processes	Do not cover steps involved in innovative work behavior process
Group 2	Kanter (1988), Scott and Bruce (1994), Janssen (2000, 2005), Van der Vegt and Janssen (2003), De Jong and Den Hartog (2008)	Explicitly distinguished the stages of innovative work behavior via defining it as a complete process. Provided a valid measure as well	Generalizability of the concept was compromised

Table 2.3 above showed that innovative work behavior being a stepwise process is different from creativity (that only involves generation of novel ideas (Mumford & Gustafson, 1988)). However, creativity was considered as one stage in the multistage process of IWB (Kanter, 1988).

Ethical Leadership and Innovative Work Behavior

IWB on the part of employees ensures sustainable growth of the overall organization (Dhar, 2016). However, during this stepwise process employees may face numerous conflicts, risks, ethical dilemmas and difficulties (Yidong & Xinxin, 2013). Therefore, many contextual factors particularly ethical leadership can have significant influence on employees' engagement in IWB.

In view of the conceptualization of EL (Brown et al., 2005), social exchange theory (SET; Blau, 1964) provides foundation for explicating influence of EL on IWB. As SET suggests that subordinates reciprocate the positive treatment they receive from their leaders. Particularly, ethical leadership demonstrated through qualities of openness, altruism, honesty, collective motivation, justice, trustworthiness, fair treatment and people orientation (Brown et al., 2005; Resick et al., 2006; Brown & Trevino, 2006) help and contribute at each step of the IWB such as (a) via providing subordinates with chances to enhance work related information and assigning jobs according to their skills (Zhu et al., 2004), ethical leaders make followers expert of generating new ideas; (b) ethical leadership support idea promotion by exhibiting qualities of honesty and altruism (Gardner et al., 2005) as ethical leaders make followers feel safe to express new ideas by encouraging workplace communication (Martins & Terblanche, 2003); and, (c) in the last step, ethical leaders by providing subordinates with freedom, autonomy, active role,

independence and control over the tasks (Oke et al., 2009; Piccolo et al., 2010; Brown et al., 2005) aid idea implementation. Therefore, it can be anticipated that followers of ethical leaders with less constraints will practice more innovative work behavior to respond positive management by their leader.

There are few studies in the management literature which examined role of ethical leadership in determining followers IWB (e.g., Yidong & Xinxin, 2013; Dhar, 2016) and reported positive relationship. Some scholars also testified positive influence of ethical leadership on creativity i.e., a key constituent of innovative work behavior---rather an initial step of overall innovation process (e.g., Ma et al., 2013; Javed et al., 2017; Mehmood, 2016).

Hence, literature necessitates further investigations of the influence of EL on IWB in the developing societies for more generalized findings. To fill this gap, based on previous studies, current research proposed that EL encourage IWB of researchers employed in government organizations of Pakistan.

Psychological Empowerment

Numerous organizational researchers have defined psychological empowerment. Literature can be divided into two groups. First group of scholars including Burke (1986), Neilsen (1986), Conger and Kanungo (1988), Macher (1988), Liden et al. (1993) defined empowerment as employee's self-determination/autonomy or self-efficacy. This group adapted a unidimensional approach toward empowerment.

The second group of researchers including Thomas and Velthouse (1990), and later on Spreitzer (1995) conceptualized PE as person's increased intrinsic work

motivation to perform his job roles demonstrated in four perceptions of meaning, self-determination, competence and impact.

Meaning reflect employee's perceived value of his job or work goal (Thomas & Velthouse, 1990; Zhang & Bartol, 2010). *Competence* (similar to Conger and Kanungo's (1988), and Bandura's (1977) conception of self-efficacy) refers to worker's faith in his own abilities for performing allocated tasks with essential skill and knowledge (Gist, 1987). *Self-determination* mirrors employee understanding of having choice and autonomy in actions and performing tasks at workplace (Deci et al., 1989; Avolio et al., 2004). *Impact* mirrors amount of an employee's supposed influence on operating and managerial work outcomes (Raub & Robert, 2012; Ashforth, 1989). Spreitzer (1995, 1996) supplied empirical evidences for describing PE as one higher-order construct comprised of four sub-dimensions. Being the most comprehensive perspective on empowerment the conceptualization provided by second group is considered in this study. Above discussion is consolidated in Table 2.4 below:

Table 2.4

Psychological Empowerment Conceptualizations

Group	Authors	Contribution	Gaps
Group 1	Burke (1986), Conger and Kanungo (1988), Neilsen (1986), Liden et al. (1993), Macher (1988)	Defined as employee's self-determination /autonomy or self-efficacy	Lacks the multidimensional conceptualization
Group 2	Thomas and Velthouse (1990), Spreitzer (1995)	Provided a multidimensional conceptualization and a validated measure	All four cognitions may not exist with similar intensity at the same time

The researches given in Table 2.4 indicated that empowerment is not to be imposed rather workers must perceive themselves psychologically empowered (e.g., Spreitzer, 1995; Conger & Kanungo, 1988).

Ethical Leadership and Psychological Empowerment

Conger and Kanungo (1988) advocated supervision as a general antecedent of PE. Thus, behavior of leader is among the important ways in which employees obtain information about their empowerment. Particularly, ethical leaders have abilities characterized as empowering behaviors (Conger & Kanungo, 1988). Therefore, EL can be anticipated to enhance subordinate's PE in several ways.

First, ethical leaders via considering subordinates' developmental needs, assigning them work roles according to individual competencies and treating them with respect may enhance followers' sense of meaning (Zhu et al., 2004). Second, considering employees' benevolence can cause ethical leaders to engage subordinates in conditions facilitating confidence and growth related to job knowledge and skills, thereby contributing toward their perceived competence (i.e., self-efficacy). Consistently, Walumbwa et al. (2011), Ma et al. (2013), Wang et al. (2015) provided empirical evidences for the positive link among EL and subordinates' perceived competence (or self-efficacy). Third, ethical leaders via inquiring "what is the right thing to do?" offer their subordinates with more participation in organizational rulings. Such involvement and increased contact with leader is likely to result into followers' perceived decision influence and autonomy (Scandura et al., 1986), thus fostering sense of self-determination. This also signals employees that their participation and input is valued

(Pierce & Gardner, 2004), increasing employees' feeling of impact on work policies and outcomes.

Indeed, recent study by Wang et al. (2015) highlighted positive connection amongst EL and followers perceived self-impact. Therefore, it can be expected that via increasing followers' views of meaning, self-determination, competence and impact, EL may significantly contribute toward subordinates' overall PE.

In their research regarding hotel employees, Javed et al. (2017) demonstrated that ethical leadership significantly and positively contribute toward follower's psychological empowerment. Other than Javed et al. (2017), most of the previous studies considered only few aspects of empowerment while examining the influence of EL. Moreover, all researches in the past were conducted for employees of private organizations.

Thus, to fill the literary gap and for more generalized results present research is focused on examining link between EL and PE for researchers in government organizations. Furthermore, till date no empirical research tested the influence of EL on follower's VB and IWB via mediating role of PE. Current study will also address these literary gaps.

Mediating Role of Psychological Empowerment in Ethical Leadership and Voice Behavior Relationship

Other than enhancing perceived PE, EL is likely to increase subordinate's VB through PE. As psychological empowerment specifically relates to extra-role behaviors, it is reported to encourage voice behavior because individual's empowerment beliefs help him/her to express his/her opinion about workplace issues (Raub & Robert, 2012).

Social learning theory (Bandura, 1977) also renders some support for psychological empowerment as a mediator. As ethical leaders tend to voice publically in support of productive work methods and for constructive changes, such activities motivate subordinates to engage in similar behaviors through observational learning (Bandura, 1977). However, individuals evaluate the acquired information about their capabilities and then based on that they decide about how to react to a particular situation (Bandura, 1977). For instance, workers with low perceived self-efficacy might think they are not capable enough to voice their opinions that are necessary for organizational effectiveness (Landau, 2009). Whereas, with more perceived empowerment individuals tends to believe that they are capable and are in a position to suggest changes with significant impact on organizational policies and outcomes (Walumbwa et al., 2010; Raub & Robert, 2012).

Voicing opinions and suggestions may also bring social and material risks (Morrison, 2011), therefore, voice behavior require individuals to bear these risks. Research reported that employees with more empowerment beliefs are more confident to take such risks (Liang et al., 2012; Wang et al., 2015).

While the examination of mediating role of PE in EL and VB relationship has been given a little attention, there are some empirical evidences. For instance, Wang et al. (2015) reported that EL enhances VB of subordinates through self-impact and self-efficacy (components of overall PE construct). Additionally, Raub and Robert (2012) found empowering leadership (that is considered as relevant to ethical leadership (Lee et al., 2017)) to enhance subordinates VB through mediating role of PE. Considering

theoretical and empirical arguments, and to fill the literary gap, current research proposes PE as a mediator to EL and VB relationship.

Mediating Role of Psychological Empowerment in Ethical Leadership and Innovative Work Behavior Relationship

Psychological empowerment can also function as a key pathway that mediates EL and IWB relationship. Since, psychologically empowered personnel trust that they have enough competence, more job independence and control on work outcomes (Spreitzer, 1995). Therefore, they are more probable to be creative, feel less bound and constrained as compared to other coworkers.

Social learning theory (Bandura, 1977) and SET (Blau, 1964) correspondingly support mediating role of PE in EL and IWB relationship. Considering social learning theory, when employees observe their leader being ethical and acting in paramount interest of subordinates and organization, they become more motivated to imitate leader's behavior and get engaged in innovative work behavior for overall organizational improvements. Moreover, when ethical leader make followers experience more psychological empowerment, they become more capable of reciprocating this positive treatment, ultimately generating and successfully implementing new ideas for improvements in existing work processes and products.

In line with these theoretical argumentations, Chughtai (2016) and Javed et al. (2017) provided some empirical evidences via demonstrating mediation of PE in the link between EL and employee creativity (that is analogous to idea generation stage of IWB). Whereas, Ma et al. (2013) also supported mediating role of self-efficacy (i.e., competence in overall psychological empowerment construct) while investigating the impact of EL on

followers creativity. However, regardless of all theoretical and empirical evidences, there exist no empirical research examining mediating role of PE in EL and IWB relationship. Present research is intended to fill this literary gap.

Leader-Member Exchange

In organizational sciences theory of LMX has received extensive consideration (Walumbwa et al., 2011; Nahrgang et al., 2009). LMX is established on exchange of vital resources and amount of emotional support (Sparrowe & Liden, 1997; Liden et al., 1997) between a leader and his followers. Therefore, LMX is considered as a social exchange connection between leader and his direct reports (Masterson et al., 2000).

High-quality LMX is categorized by loyalty, reverence, sense of obligation and shared trust amongst the leader and his subordinates (Graen & Uhl-Bien, 1995; Van Dyne et al., 2008; Dulebohn et al., 2012). Whereas, low level of LMX promote restricted and formal relationships based only on economic exchanges predominantly characterized by low trust, fewer rewards and lessened support not extending beyond employment contract (Botero & Van Dyne, 2009).

SET proposes that subordinates develop strong quality exchange relationships with their supervisors based on individual experiences of how they interact, whom they interact and the frequency of such interactions (Blau, 1964; Cropanzano & Mitchell, 2005; Dienesch & Liden, 1986; Coyle-Shapiro & Conway, 2004). This makes role of leadership more crucial for social exchanges (Erdogan et al., 2006; Cropanzano & Mitchell, 2005; Wayne et al., 2002). Thus, it may be argued that because LMX is developed by frequency and experiences of exchanges among leaders and subordinates,

immediate bosses, based on their proximity to employees, play a crucial role for enhancing LMX.

Ethical Leadership and Leader-Member Exchange

Fewer efforts were made in the past to test how EL relates to LMX. However, in several ways ethical leaders are capable of developing high-quality exchange relationships with subordinates. First, as ethical leaders are perceived as honest individuals who are trustworthy, righteous decision makers and sensitive for overall benefits of subordinates and the organization as a whole (Brown & Trevino, 2006; Trevino et al., 2003). Such employee perceptions ultimately results into high-quality exchange relationship based on mutual support, trust, loyalty and emotional connections (Erdogan et al., 2006; Walumbwa et al., 2011; Wayne et al., 2002). Second, ethical bosses also prefer to develop trusting relations with subordinates via encouraging employee input without suppressing their opinions (Brown et al., 2005; Brown & Trevino, 2006). Therefore, ethical bosses are proficient to develop quality interpersonal relationships that are more than ordinary employment contracts and standard economic exchanges (Brown & Trevino, 2006), ultimately facilitating higher quality LMX.

Allied to this, Mahsud et al. (2010), Qian et al. (2017), Walumbwa et al. (2011) reported that EL positively relates to LMX. However, most of the preceding studies were conducted utilizing data from the private organizations. Therefore, based on literature present research proposed that EL enhances LMX in the government sector organizations as well. Moreover, this research is also intended to extend literature via investigating mediation of LMX in the link among EL and employee extra-role behaviors (i.e., VB and IWB).

Mediating Role of Leader-Member Exchange in Ethical Leadership and Voice Behavior Relationship

LMX can be a significant conduit since, voice being a target sensitive behavior challenging status quo involves numerous costs and risks. The fear of social and material loses may make employees not to voice their views. However, as leader is potential target of voice, employees' perceived quality of relationship with leader may help them determine associated benefits and costs of voice behavior (Hsiung, 2012). At higher level of LMX, followers feel more understanding of and trust in leader, that derive them express their concerns and opinions freely without any fear of misinterpretation (Hsiung, 2012).

SET (Blau, 1964) suggests that people provide information and resources in order to reciprocate favorable treatment from others. Therefore, when employees perceive being in a higher level of exchange relationship with their leader, they become willing to engage in extra-role behaviors to reciprocate the treatment they received (Wayne et al., 2002; Newman et al., 2017). Since, high-quality LMX denotes a partnership level association among the supervisor and his subordinates (Uhl-Bien et al., 2000). In that case, followers may not focus on personal risks and costs, feeling more obligations to suggest constructive changes (Deluga, 1994).

Management literature lacks empirical researches examining mediating role of LMX in EL and VB relationship. Though, there are some researches demonstrating mediating role of LMX for transferring effects of positive leadership behaviors on subordinate's in-role and extra-role efforts (e.g., Walumbwa et al., 2011; Hsiung, 2012; Newman et al., 2017). Thus, based on social exchange theory and previous researches,

and to fill the literary gap, this research proposed that LMX mediates EL and VB relationship.

Mediating Role of Leader-Member Exchange in Ethical Leadership and Innovative Work Behavior Relationship

LMX can also mediate link among EL and IWB. Since, theoretically LMX has been noted to encourage employee creative behaviors. As, high-quality LMX relationship help leader to allocate resources, provide psychological support and dispense benefits to subordinates (Graen & Uhl-Bien, 1995). Thus, at higher level of LMX employees perceive work environment more encouraging and feel obliged to reciprocate positive behavior of their leader via getting engaged in extra-role creative efforts (Volmer et al., 2012; Atwater & Carmeli, 2009). Particularly, when ethical leader's relationship with subordinates grow from exchanges that are official and impersonal (lower level of LMX) to relationship perceived as mutual respect and trust (higher level of LMX) (e.g., Erdogan et al., 2006; Walumbwa & Schaubroeck, 2009) ethical leaders start providing followers with more decision latitude and autonomy, found to be essential factors for employee's innovative work behavior (Pelz & Andrews, 1966). Thus it can be expected that ethical leadership via enhancing quality LMX contributes toward employee IWB.

Empirically, Walumbwa et al. (2011) described that EL positively and significantly predict LMX. Whereas, Sanders et al. (2010) found LMX predicting employees innovative work behavior. Basu and Green (1997) also reported that leader-member exchange quality significantly relates to innovative behavior of employees. More recently, Dhar (2016) in his study of hotel workers testified that LMX mediates link between EL and service innovative behavior of employees.

Literature suggests that most of the previous researches regarding mediating role of LMX were conducted for employees working in private organizations. Therefore, for more generalized findings present research proposed that LMX also mediate the link amongst EL and IWB for government sector employees as well.

Job Performance

Numerous researchers defined the concept of job performance. In this regard literature can be divided into two groups. First group defined job performance as an employee's accomplishment of assigned tasks (Murphy, 1989; Campbell, 1990; Campbell et al., 1993). Their definition although provided a basic conceptualization, yet, it was more focused on actions an organization appoints one to do.

The gap was filled by second group of scholars including Borman and Motowidlo (1993), Motowidlo et al. (1997), Viswesvaran and Ones (2000), Borman and Motowidlo (1997), McConnell (2003) defining JP as accomplishment of all tasks related to organizational objectives which can be measured. This group provided most generalized conceptualization by including all activities which are measureable and contributing toward organizational objectives. Above arguments can be summarized in Table 2.5 below:

Table 2.5

Job Performance Conceptualizations

Group	Authors	Contribution	Gaps
Group 1	Campbell (1990), Murphy (1989), Campbell et al. (1993)	Defined as accomplishment of tasks stated in employee's job content	Focused only on actions an organization appoints one to do
Group 2	Motowidlo et al. (1997), Borman and Motowidlo (1997), McConnell (2003), Borman and Motowidlo (1993), Viswesvaran and Ones (2000)	Defined as performing all tasks contributing toward and linked with organizational goals	Conceptualization becomes varied with respect to job and context

As given in Table 2.5, it becomes clear that JP is a multi-dimensional construct. Whereas, Borman and Motowidlo (1997), Motowidlo and Van Scotter (1994), and Hattrup et al. (1998) suggested that individual's personal skills and abilities are more likely to determine task related performance compared to other performance behaviors. Therefore, based on the above discussion, only task related performance behaviors are considered as JP in this research.

Moderating Role of Job Performance in Ethical Leadership and Voice Behavior Relationship

To further enrich understanding of the linkage between EL and VB, present research focused on moderating role of employee job performance. Since, job performance being an important workplace behavior that varies widely among individuals, is reported as an important factor to be considered while examining role of leadership in determining employee voice behavior (e.g., see Detert & Burris, 2007).

Particularly, poor performers who need more help and motivation from their leader are more likely to voice constructive suggestions and perceive more safety as compared to their high performing counterparts when being managed by an ethical leader. This argument is consistent with previous research, as Brockner (1988) suggested that contextual factors are more significant for individuals with low self-esteem (that is often a correlate of job performance (Hutman, 1999)) than for persons with high self-esteem. As, employees lower on JP and self-esteem are more likely to search for contextual prompts to validate or invalidate perceived self-worth. Moreover, employees with poor performance are least confident about appropriateness of their behaviors and attitudes (Detert & Burris, 2007), so they are mostly expected to be effected by external forces (e.g., leadership).

Rendering more support to study proposition, Hersey and Blanchard (1982) in their book about situational leadership, argued that all employees should not be managed in a similar way. Therefore, employees who are performing low if managed with more coaching and supporting behavior (empowering style of leadership) may become able to 'run the ball confidently'. It can be expected that ethical leaders (having abilities

characterized as empowering behaviors (Conger & Kanungo, 1988)) will enhance voice behavior of low performing subordinates more than the high performers.

Although there exist no empirical research investigating moderating role of JP in EL and VB relationship. However, Avey et al. (2011) reported significant and strong relationship among EL and organizational citizenship behaviors (i.e., extra-role effort just like voice behavior) for workers with lower self-esteem (frequently a correlate of JP (Hutman, 1999)) than those with higher self-esteem. Based on above literary arguments and Avey et al. (2011) findings, current research proposed JP as a boundary condition of EL and VB relationship such as the positive link is stronger for poor performers compared to high performers.

Locus of Control

LOC denotes individuals' perceptions regarding whether they themselves guide life outcomes (i.e., internal LOC) or their life upshots are determined by other people and external factors (i.e., external LOC) (Rotter, 1966). Spector (1988) operationalized this concept in relation to work context and developed work locus of control scale. As described by Spector (1982, 1988), LOC denotes generalized expectancy that work related outcomes, such as success or failures, are influenced by an employee's personal activities (i.e., internal LOC) or outer forces (i.e., external LOC). According to Spector (1988) work locus of control is more appropriate for investigations and studies in organizational context. Therefore, this study will use LOC conceptualization as proposed by Spector (1982, 1988).

Moderating Role of Locus of Control in Ethical Leadership and Innovative Work Behavior Relationship

In present study LOC is considered as moderator to the link between EL and IWB. Since, previous studies have shown dissimilar workplace behaviors and attitudes by internals (employees experiencing more internal LOC) and externals (employees experiencing more external LOC). Such as, internals in contrast with externals are stated to, feel less role pressure, have more job satisfaction, more sense of autonomy, more respect for leaders, enjoy lengthier tenures, show less counterproductive behaviors and get engaged in more organizational citizenship behaviors (Spector, 1982; Robbins, 2000; Thomas & Velthouse, 1990; Sprung & Jex, 2012; Turnipseed, 2017). As, internals may adopt an active role compared to externals who prefer a passive role with respect to their environment (Krenl, 1992).

Particularly, ethical leadership facilitate employees to perceive environment more supportive in which competence is recognized, opportunities are provided, freedom is given, participation in decision making is allowed and problems are responded. Therefore, ethical leadership which provide followers with more perceived task significance, job autonomy and self-efficacy (Walumbwa et al., 2011; Piccolo et al., 2010), is expected to encourage active participation of internals in terms of more innovative work behavior.

Whereas, employees with external LOC are relatively passive and subject to external cues hence, want their tasks be arranged specifically in detail (Spector, 1982; Krenl, 1992) with less freedom and autonomy. Since, they have poor inherent independence; therefore, ethical leadership (which provides more autonomy and freedom

encouraging active participation) may bring them stress rather than encouraging them to get engaged in IWB.

Yidong and Xinxin (2013) also proposed that LOC can manipulate linkage between EL and IWB. However, management literature lacks empirical researches investigating moderation of LOC in EL and IWB relationship. Therefore, to fill the literary gap, present research proposed that EL encourage IWB of internals more than externals.

Research Framework

Above literature review proposed some gaps necessitating further investigations. Literature suggested that there is a need to focus on specific leadership behaviors for investigating employee extra-role efforts. To fill the literary gap current research is intended to examine EL as antecedent to employee extra-role efforts including VB and IWB.

Role of ethical leadership is crucial for determining voice behavior. As suggested by Morrison (2011) and Hassan (2015) role of specific leadership behaviors (particularly ethical leadership) need more investigations. Therefore, present research is intended to investigate direct and indirect effect of EL on VB.

Yidong and Xinxin (2013) suggested that literature is deficient regarding the role of EL in determining IWB of the followers. Thus, current research is aimed to fill this gap via examining the direct and indirect linkage between EL and IWB.

Till date no empirical research has examined the influence of EL on VB and IWB via mediating role of PE. Although, ethical leaders possesses various leadership qualities that can be considered as empowering behaviors (Conger & Kanungo, 1988), therefore,

in the current research psychological empowerment is considered as mediator to the role of EL in determining VB and IWB.

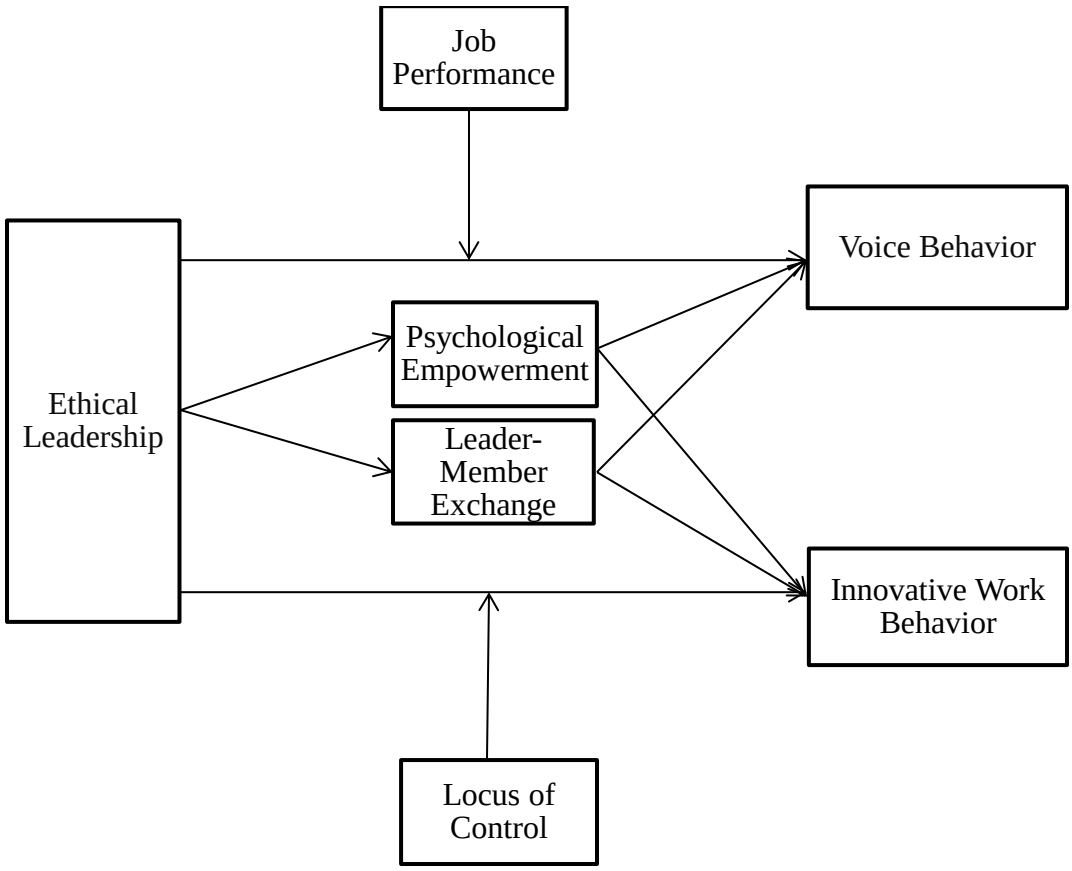
Literature supports the proposition that LMX can be an important conduit transferring EL effects on VB and IWB. However, there are insufficient empirical studies regarding role of EL in determining VB and IWB taking LMX as mediator. This research is intended to address the literary gap.

Current study also considers JP as moderator to EL and VB relationship. As, there exist no empirical research investigating JP as moderator to EL and VB relationship. Moreover, following the proposition of Yidong and Xinxin (2013), current study also considers LOC as potential moderator to EL and IWB relationship.

Literature reviewed proposed that maximum of previous researches on EL, VB, IWB, PE, LMX, JP and LOC were conducted in Chinese, American and European societies with specific cultural orientations. Moreover, there are few such studies conducted for employees working in government organizations. To fill the literature gaps and for more generalized results this research is intended to test proposed hypotheses using primary data obtained from research scientists working in government research organization of Pakistan.

Current study offers a comprehensive research framework (see Figure 2.1) based on above stated literature gaps.

Figure 2.1 *Research Framework*



The above proposed research framework comprises of one independent (ethical leadership), two mediating (psychological empowerment and leader-member exchange), two moderating (job performance and locus of control) and, two dependent (voice behavior and innovative work behavior) variables.

The proposed framework has implications for scholars and practitioners. For scholars it may expand overall understanding of employee related outcomes of EL. Particularly, concentrating on individual-related mediators and moderators, this study

may help future scholars for understanding how, why and for what kind of employees EL encourage VB and IWB.

By examining EL influence on VB and IWB, considering role of PE, LMX, JP and LOC, current study may help practitioners and managers to comprehend the role of EL in encouraging employee extra-role efforts at workplace. This research may also assist organizational policy makers to design policies for developing, evaluating and rewarding ethical behaviors on the part of leaders.

Hypotheses

Based on research framework, following are proposed research hypotheses:

H1: EL is positively related to VB. (Page 20 and 21)

H2: EL is positively related to IWB. (Page 23 and 24)

H3: EL is positively related to PE. (Page 26 and 27)

H4: PE mediates the relationship between EL and VB. (Page 27 to 29)

H5: PE mediates the relationship between EL and IWB. (Page 29 and 30)

H6: EL is positively related to LMX. (Page 31 and 32)

H7: LMX mediates the relationship between EL and VB. (Page 32 and 33)

H8: LMX mediates the relationship between EL and IWB. (Page 33 and 34)

H9: JP moderates the relationship between EL and VB such that the positive relationship is stronger for poor performers than for high performers. (Page 36 and 37)

H10: LOC moderates the relationship between EL and IWB such that the positive relationship is stronger for employees with an internal locus of control compared to those with an external locus of control. (Page 38 and 39)

Chapter Summary

This chapter provides literature review on study variables to identify literary gaps. A comprehensive research framework was also proposed in this chapter. Study hypotheses were also given in this chapter. Next chapter covers the methodology of current research. More explicitly, the subsequent chapter will provide with the operational definitions of study variables; details of study respondents; data collection tool used; data collection procedure; and, details of the statistical techniques applied to test proposed hypotheses.

Chapter Three: Research Methodology

In the preceding chapter a detailed literature review concerning the study variables was conducted and a comprehensive research framework was proposed. This chapter is about the research methodology of current study and provides operational definitions of study variables/constructs, details of study respondents, data collection tool used, data collection procedure and finally details of statistical techniques applied in the present study to test proposed hypotheses. Current chapter is separated into six portions. Operational definitions of study constructs/variables are given in the first part. Second part of the chapter is about details of study respondents. Data collection tool used in the present study is explained in the third part. Fourth part is about data collection procedure. Fifth part provides details of the statistical techniques applied in the present research for testing proposed hypotheses. Last part is the chapter summary.

Operational Definitions of Study Variables

Ethical Leadership

Ethical leadership (EL) is an assessment of employee's perception about leader having qualities such as integrity, clear vision, fair treatment, principled decision making, trustworthiness, people orientation, justice, supportiveness, collective motivation and moral behavior (Brown et al., 2005; Brown & Trevino, 2006). In this study high scores on EL scale (Brown et al., 2005) indicates more perceived EL and vice-versa.

Voice Behavior

Voice behavior (VB) is an assessment of employee's positively intentioned promotive behavior that involves expression of positive challenge focused on necessary improvements at workplace other than the conventional criticism (Van Dyne & LePine, 1998). In this research high scores on VB scale (Van Dyne & LePine, 1998) show more VB and vice-versa.

Innovative Work Behavior

Innovative work behavior (IWB) is an assessment of worker's engagement in the process of idea 'generation, promotion and implementation' aimed at improving overall functioning of the organization (Janssen, 2000, 2005). In present research high scores on IWB scale (Scott & Bruce, 1994) show more IWB and vice-versa.

Psychological Empowerment

Psychological empowerment (PE) is an assessment of employee's intrinsic work motivation to perform his job roles demonstrated in four perceptions of "meaning, impact, self-determination, and competence" (Spreitzer, 1995; Thomas & Velthouse, 1990). Whereas, meaning reflect an employee's perceived value of his job or work goal. Competence refers to worker's confidence on his personal abilities to complete allocated jobs with necessary knowledge and skill. Self-determination mirrors one's perception of having choice and autonomy in performing tasks at workplace. Impact reflects the degree of a worker's supposed impact on organizational work outcomes. In the current study high scores on psychological empowerment scale (Spreitzer, 1995) show more psychological empowerment and vice-versa.

Leader-Member Exchange

Leader-member exchange (LMX) is degree of exchange amongst leader and his follower (Graen & Scandura, 1987). In this research higher rating on the LMX scale (Scandura & Graen, 1984; Graen & Uhl-Bien, 1995) show more LMX and vice-versa.

Job Performance

Job performance (JP) is an overall assessment of employee's work quantity, quality, efficiency, ability, accuracy, judgement, job knowledge and creativity while performing core job tasks. High scores on JP scale (Tsui et al., 1997) were deliberated as more JP and vice-versa.

Locus of Control

In present research, locus of control (LOC) is an evaluation of employee's generalized expectancy about sources of consequences in work context. Internal LOC specifies individual's confidence of self-control over job outcomes, and external LOC specifies individual's faith that his job outcomes are determined by other people and external factors. In this study high scores on WLCS (Spector, 1988) indicate externality and low scores indicate internality.

Respondents of the Study

Targeted Population

Targeted population indicates the whole cluster of things, people or events a scholar wants to study (Sekaran, 2003). In order to obtain reliable results it is essential to identify right respondents with comparable settings according to the focus of research. As the focus of present study is to investigate impact of EL on subordinates VB and IWB, therefore, targeted population considered for this research was employee researchers

working in government research organizations (with an exclusive focus on agriculture, veterinary, poultry, medicine and health related research) of Pakistan. Reasons for selecting researchers (employed in government organizations) as targeted respondents were threefold. First, only government employees were selected as government organizations follow more or less similar policies for their employees and provide more or less comparable work settings. Second, present study is focused on examining employee's 'VB and IWB' at workplace and researchers are the individuals who are usually involved in knowledge intensive innovative projects where both voice and innovative behaviors are important for successful and efficient completion of the projects. Third, previous studies have also considered researchers/scientists working in government organizations for examining the similar variables such as, ethical leadership, voice behavior and creativity (e.g., Chen & Hou, 2016).

In Pakistan there are many government organizations for research and development in agriculture, veterinary, poultry, general health and medicine. These organizations are located in federal territory and all other parts of the country. However, it is reported that most of the highly qualified researchers are either working in federal organizations or in the institutions located in Punjab province (Stads et al., 2015). The considerable difference of qualified research scientists in different parts of country is attributed to comparatively lower salary packages, restricted training, controlled recruitment and dearth of performance-based incentives at provincial level. For example, there are total 3678 agricultural researchers employed in Pakistan, among those 2138 are working in federal and Punjab (Stads et al., 2015). Due to lack of documentation and unavailability of statistics, number of employee researchers in veterinary, poultry, health

and medicine related research organizations of Pakistan is not well documented. However, based on the statistics available for agriculture sector, most optimistically it can be anticipated that 15000 research scientists are employed in agriculture, veterinary, poultry, health and medicine related research organizations of Pakistan thus, suggesting a targeted population of 15000 for the present research.

Sampling Procedure

It is essential that a sample size selected for any research should be representative of the targeted population so that more reliable results could be obtained. Roscoe (1975) advocated '30 to 500 subjects' as a range for suitable sample to conduct any behavioral research. More specifically, Krejcie and Morgan (1970) provided a table to decide about a representative sample for any defined population. According to the table provided by them, for current study, sample of 375 individuals is enough. However, due to lack of documentation and unavailability of record for exact number of researchers working in selected research organizations of Pakistan, this study strived for a larger sample to obtain more reliable results. As, Field (2009) suggested that a larger sample of 500 is most likely to better reflect any targeted population.

For the purpose of data collection self-reported questionnaires were distributed in ten government research organizations (with an exclusive focus on agriculture, veterinary, poultry, medicine and/or health related research) located in four major cities (Rawalpindi, Islamabad, Lahore and Faisalabad) of Pakistan. Organizations located in the federal territory and Punjab province were considered for the purpose of sampling. The reasons for selecting organizations only from Islamabad and Punjab were twofold. First, current research focus was other than the investigation of cultural differences. Second, it

is reported that in Pakistan most of the highly qualified research scientists are employed in government organizations located in federal territory and Punjab province (Stads et al., 2015).

In current research the study sample was obtained using a purposive sampling design. Since, present research was concentrated on voice behavior and innovative work behavior of research scientists therefore, instead of obtaining primary data from all employees (including but not limited to research scientists, lab assistants/attendants, technicians and managerial staff) of selected organizations the study sample was kept confined to research scientists only, as they were the individuals in a best situation to deliver required data according to research focus. In total 800 questionnaires were distributed in the selected organizations. Initially, 546 filled questionnaires were received from which 38 questionnaires were discarded because of erroneous filling. Therefore, 508 properly filled questionnaires showing 63.5% response rate were obtained. Thus, sample size considered for present research was comprised of 508 research scientists.

Data Sources

Primary data is any data that is collected firsthand for investigations to provide elucidation of a problem considered (Sekaran, 2003). Whereas, secondary data consist of constituents previously gathered by researchers, organizations and journals, published or unpublished that are useful for the purpose of research (Sekaran, 2003). In the present study sources of the primary data were the research scientists employed in ten government research organizations of Pakistan. Whereas, secondary data sources consulted for the present research were inclusive of journal articles, doctoral dissertations, reports and books etc.

Data Collection Tool

Quantitative Survey

Quantitative survey was considered as a suitable research design for measuring perceptions and behaviors of the scientists in present research. Fowler (2002) suggested that being a quantitative method, survey research produce standardized information for defining variables and for studying relationships among variables. Moreover, survey method is also considered most useful to infer characteristics of large populations (Dillman, 2007; Babbie, 2007). Therefore, it is a preferred method compared to other methods e.g., focus groups, historical analysis, content analysis and small group experiments (Dillman, 2007). Additionally, as in survey research necessary information is obtained from a small portion of the targeted population, it provides an inexpensive, quick, accurate and efficient mean of data collection (Saunders et al., 2009; Kerlinger, 1986).

Data Collection Method

In a survey based study required data can be collected using any of two methods (a) interviews and/or (b) self-administered questionnaires. Although interviews are the more powerful tool of data collection for survey based studies (Kerlinger, 1986; Dillman, 2007) but, interviews are not considered suitable for quantitative studies which necessitate larger sample. Therefore, in the current research self-administered questionnaires were utilized to gather data from research scientists. Method of self-administered questionnaires offer some advantages such as, it provide more access to the geographically dispersed respondents, it is relatively inexpensive, let individuals to consult others or the records and to think about their responses (Zikmund, 2003; Fowler,

2002). Moreover, it also provides respondents an opportunity to provide socially undesirable or sensitive information that they may not provide in personal interviews (Babbie, 2007; Zikmund, 2003; Fowler, 2002).

Questionnaire

Primary data was gathered using self-reported questionnaire. The questionnaire (provided in Appendix A) utilized in this research was parted into eight portions. For nominal data related to respondent's job and demographic particulars, a demographic sheet was included as the first part of the questionnaire. Demographic sheet included questions regarding gender, age, education, length of service and employment status of the respondents. The remaining seven parts of the questionnaire were comprised of the scales used to measure study variables.

While designing questionnaire for present research, some procedural remedies recommended by Podsakoff et al. (2003) were followed to lessen possibility of common method bias. First, on cover letter of the questionnaire, respondents were guaranteed of complete confidentiality about their personal information and the identity of their respective organization. Moreover, it was also assured that the primary data being collected through this questionnaire will only be used to aggregate responses for generating and publishing aggregated results. It was expected that the explicit confidentiality statement would encourage participants for more honest responses. Second, for controlling response consistencies, order of questions was counterbalanced, as the measures of dependent variables were placed before that of the independent variable. Lastly, in this research well established and validated scales were used to

measure study variables. As, this step is reported to reduce possibility of common method bias. Following is the description of scales used in this research:

Ethical leadership scale. Ten-item scale (provided in Part-VI of Appendix A) that is developed by Brown et al. (2005) was utilized to assess EL. All items of scale were to be graded on a five-point scale ranging from 1(strongly disagree) to 5 (strongly agree). This scale is extensively used in previous researches (e.g., Tu & Lu, 2016; Chen & Hou, 2016). Pre-established reliability of this scale was reported above .90 (Brown et al., 2005; Chen & Hou, 2016).

Voice behavior scale. Six-item scale (provided in Part-II of Appendix A) developed by Van Dyne and LePine (1998) was utilized to assess VB. All items of this scale were required to be graded on a seven-point scale i.e., 1 (strongly disagree) to 7 (strongly agree). This scale is extensively utilized in the prior researches (e.g., Hsiung, 2012; Jiang et al., 2017). Pre-established reliability of this scale was reported above .87 (Van Dyne & LePine, 1998; Hsiung, 2012).

Innovative work behavior scale. Six-item scale (provided in Part-III of Appendix A) developed by Scott and Bruce (1994) was used to gauge IWB. Six items were to be graded on five-point scale i.e., 1(strongly disagree) to 5 (strongly agree). This scale is extensively utilized by previous researchers (e.g., Yuan & Woodman, 2010; Xerri & Brunetto, 2013). Pre-established reliability of the scale was .89 (Scott & Bruce, 1994).

Psychological empowerment scale. Twelve-item scale (provided in Part-IV of Appendix A) developed by Spreitzer (1995) was used in present research to assess psychological empowerment. This scale is comprised of four subscales. In their meta-analytic research Seibert et al. (2011), supporting Spreitzer's (1995) conceptualization of psychological empowerment, suggested that psychological empowerment is a second-order unitary construct comprised of the four sub-dimensions. Therefore, in the present study following Spreitzer (1995), Seibert et al. (2011) and Newman et al. (2017) scores for twelve items (from four subscales) were averaged to get single PE score for every respondent. All items of this scale were required to be rated on a seven-point scale i.e., 1 (strongly disagree) to 7 (strongly agree). This scale (measuring psychological empowerment as an overall unitary construct) is extensively used in previous studies (e.g., Zhang & Bartol, 2010; Raub & Robert, 2012; Newman et al., 2017). Pre-established reliability for overall scale was reported above .70 (Spreitzer, 1995; Zhang & Bartol, 2010).

Leader-member exchange scale. Seven-item scale (provided in Part-V of Appendix A) suggested by Graen and Uhl-Bien (1995) and originally developed by Scandura and Graen (1984) was utilized to assess LMX in this research. The items of the measure were to be evaluated on five-point scale stretching from the utmost disagreement to the highest level of agreement with each given statement. This scale (i.e., LMX-7) is widely used in previous empirical researches (e.g., Hsiung, 2012). Pre-established reliability of the scale was above .83 (Scandura & Graen, 1984; Hsiung, 2012).

Job performance scale. Eleven-item scale (provided in Part-VII of Appendix A) developed by Tsui et al. (1997) was used to assess task performance. The scale items were to be rated on seven-point scale (with responses stretching from "1 (strongly disagree) to 7 (strongly agree) for six items assessing employee's quality of work, quantity of work and efficiency while performing basic job tasks" and "1(completely unsatisfactory) to 7 (completely satisfactory) for the remaining five items measuring employee's judgment, ability, job knowledge, accuracy and creativity while performing the assigned task"). This scale is also used by the previous scholars in empirical studies concerning employee JP (e.g., Walumbwa et al., 2011). Pre-established reliability of the scale was reported above .90 (Tsui et al., 1997; Walumbwa et al., 2011).

Locus of control scale. Sixteen-item WLCS (given in Part-VIII of Appendix A) provided by Spector (1988) was used to gauge respondents control beliefs. All items of the measure were to be rated on a six-point scale i.e., 1 (disagree very much) to 6 (agree very much). WLCS is comprised of equal number of externally and internally worded items. Higher ratings on WLCS indicate externality as, internal locus of control was measured by eight reverse coded items (1, 2, 3, 4, 7, 11, 14 and 15) with remaining eight items (5, 6, 8, 9, 10, 12, 13 and 16) measuring external locus of control. WLCS is widely utilized in past researches (e.g., Siu et al., 2002; Muhonen & Torkelson, 2004; Aube et al., 2007). Pre-established reliability of this scale was reported above .80 (Muhonen & Torkelson, 2004; Aube et al., 2007).

Data Collection Procedure

Several ethical issues were considered before starting the data collection for this study. For example, prior to the commencement of this research, a complete research proposal was submitted to "Advanced Studies and Research Board" of Quaid-i-Azam University for review and approval. After getting approval from the research board the research was formally commenced. Before collecting data from the individual respondents, respective authorities of selected research organizations were personally contacted to explain general purpose of this research, to obtain permission for data collection and to gain an insight into the focus and structure of relevant departments. Moreover, the concerned authorities of each selected research organization were assured that identity of their institution and research scientists will be kept confidential, individual participation is completely voluntary, data collected will be used only for the purpose of research and only aggregated findings will be published. In addition, to minimize ambiguities, concerned managers were also informed about data collection process, data collection method (i.e., self-administered self-reported paper and pencil questionnaire) and the estimated time period of data collection.

After obtaining permission (for data collection) from the authorities of selected research organizations, respondents were approached individually at their workplaces. Data was collected from researchers (having job experience of one year or more in the respective organization) employed in departments with special focus on research. Participants were ensured of their voluntary participation, anonymity and confidentiality. Moreover, every participant was briefed about general instructions for completing the questionnaire before being presented with the survey material. Survey material was

included of a cover letter (explaining purpose of research, confidentiality policy and encouraging voluntary participation), demographic sheet, the research scales and an envelope to return the completed questionnaire. Most of the participants agreed to return filled questionnaire back within a one week period. However, if more time to fill the questionnaire was required by any of the participant, the questionnaire was than collected back on the later visit on a pre-decided date. Researcher personally collected the questionnaires back from the participants on time. While receiving the filled questionnaires, every questionnaire was checked for missing responses and if there is any missing response the participant was requested to give his/her rating. The entire time for collecting data was six month period (June 2016 to November 2016).

After collecting the questionnaires back from the respondents the data was cleaned and organized. For this purpose the poorly filled questionnaires (e.g., questionnaires with pattern filling) were discarded. The remaining data was entered in the software for statistical analysis. Details of the study sample are specified in following Table.

Table 3.1

Details of Study Sample

Questionnaires distributed	Questionnaires received	Questionnaires discarded	Sample size	Rate of response
800	546	38	508	63.5%

Statistical Techniques Applied

Several statistical techniques were applied to analyze primary data. These statistical techniques were applied to evaluate respondents' profile, to check for validity and reliability of predeveloped scales used, to assess the possibility of common method bias, to compute descriptive statistics, to evaluate differences between demographic groups on study variables and to test the proposed hypotheses. Software programs used to apply relevant statistical techniques in the present research include SPSS version 20 and AMOS version 22 (utilized only for the confirmatory factor analysis). Following are the details of the techniques applied in this research:

Respondents Profile

It explains representation of respondents groups based on demographics in overall study sample. In the present study, respondents profile provided sample description based on 'gender, qualification, age, employment status and length of service' of respondents. Frequencies and percentages were computed to describe the study sample.

Validity and Reliability of Study Scales

Validity. Validity of an instrument is tested to ascertain how well the particular scale measure a concept it is actually planned to measure (Sekaran, 2003). For testing validity of predeveloped scales used in present research two approaches were applied (a) correlational analysis; and, (b) factor analysis.

Correlational analysis. Construct validity along with internal consistency of predeveloped measures, used in current research, were determined via calculating item total correlations and total scale correlations. Item total correlations were calculated to see how significantly items were measuring the respective constructs. For that purpose, all items of each scale were correlated with the corresponding scale or subscale (or factor) total. Total scale correlations were calculated via correlating subscales (or factors) to corresponding total score. As suggested by Sekaran (2003) the correlations were considered significant at $p < .05$.

Factor analysis. To check validity and dimensionality of predeveloped measures used in present research, respective items of all the scales were factor analyzed via confirmatory factor analysis. Confirmatory factor analysis (CFA) also determines how well the study sample support factor structure of scales being used. CFA relies on numerous statistical tests for determining model fit adequacy to data at hand. In the current research, model fit indices including chi-square to degrees of freedom ratio (χ^2/df); goodness of fit index (GFI); adjusted goodness of fit index (AGFI); comparative fit index (CFI); normed fit index (NFI); root mean squared error of approximation (RMSEA); and, standardized root mean squared residual (SRMR) were considered. As for as the chi-square to *df* ratio is concerned it could be as low as 2 (Tabachnick & Fidell, 2007) or as high as 5 (Wheaton et al., 1977). However, a value below 1 indicates a poor model fit (Shadfar & Malekmohammadi, 2013). Whereas, value less than 2 is considered best but chi-square to *df* ratio within the range of 2 to 5 is acceptable (Paswan, 2009). GFI, AGFI, CFI and NFI values greater than .95 and closer to 1 indicate good fitting model. However, values greater than .90 for GFI and AGFI (Hair et al., 1998), for CFI

(Hu & Bentler, 1999), and for NFI (Bentler & Bonett, 1980) indicate acceptable model fit. Similar standards for interpreting χ^2/df, GFI, AGFI, CFI and NFI were adopted in this study.

In the present research RMSEA value is interpreted according to researches done by Steiger (1990), Browne and Cudeck (1992), MacCallum et al. (1996) and, Fabrigar et al. (1999) as: value below .05 specify a close fit, between .05 to .08 shows fair fit, from .08 to .10 indicates a mediocre fit, and if its value exceed .10 than it shows a poor fit between model and data at hand. Moreover in this study, standardized RMR (SRMR) value not more than .08 was considered acceptable for a good fitting model as suggested by Hu and Bentler (1999). Following Stevens (2002) and Field (2009) standardized factor loading ≥ .30 was considered as cut off criteria in the present study (as sample size was quite large) to determine that a particular item substantially load on the respective factor.

Reliability. It indicates consistency and stability of the scale with which it measures a concept (Sekaran, 2003). It shows that the scale is without bias and items in the scale hang together for independently measuring the similar concept (Sekaran, 2003). Most popular and extensively used test of scale's reliability is Cronbach's coefficient alpha (Sekaran, 2003; Field, 2009). Its value near to 1 indicates higher reliability of scale. Therefore, in this research internal consistency reliability of all scales was gauged via calculating Cronbach's coefficient alpha. Following Murphy and Davidshofer (1988), Hair et al. (1992) and, Sekaran (2003) scales with alpha value above .60 were deemed reliable in the present research.

Common Method Bias

As current research utilized self-reported questionnaire for data collection, therefore, common method bias (CMB) can be an issue. The problem with CMB is that it may exaggerate the relationships among variables (Podsakoff et al., 2003). Thus in this research, following Konrad and Linnehan (1995), Zheng et al. (2010), Simonin (1997) and Esch et al. (2016) to assess the possibility of CMB, Harman's (1960) single factor test was implemented. The test is based on an assumption that if CMB is a serious issue, one general factor accounting for most variance (i.e., more than 50%) is likely to emerge as a result of exploratory factor analysis (constrained as there is no rotation) for all measurement items.

Descriptive Statistics

Getting a feel for research data is a necessary earliest step to begin the analysis (Sekaran, 2003). The statistics that provide feel for data includes (a) mean (*M*) and standard deviation (*SD*) for each of the interval-scaled study variable; and, (b) correlations between study variables irrespective of study hypotheses (Sekaran, 2003).

Mean and standard deviation for interval-scaled variables. Following Sekaran (2003), *M* and *SD* for seven study variables were computed to assess how respondents reacted to the items in the scales and how good the measures and respective items were to tap the relevant concepts.

Correlations between study variables. To determine how the interval-scaled variables associate with each other in the present research, intercorrelation matrix of variables was computed. Correlations between study variables provide with the indication that how well the variables are associated (related or unrelated) with each other i.e., what

linear relationship 'if any' exists between variables (Sekaran, 2003; Field, 2009). Pearson correlation coefficient (*r*), is the most generally utilized standardized measure for size of observed effect with its values ranging from -1 to +1 (Field, 2009). The +1 value indicates perfect positive correlation among two variables and -1 value indicates a perfect negative correlation among two variables (Field, 2009). Whereas, if value of the coefficient is 0 it indicates that no linear relationship exist among two variables (Field, 2009). For the determination of effect size Field (2009) suggested that value of ±.1 shows small, ±.3 shows medium and ±.5 shows large effect size. Similar criteria's were followed in the current study and the correlation results were considered significant at $p <$ .05 i.e., a generally accepted significance level in social sciences as suggested by Sekaran (2003).

Comparison between Demographic Groups on Study Variables

Comparison between demographic groups of respondents shows the extent to which these groups differ from each other on the particular variables (Sekaran, 2003). Statistical technique/test to be applied for group comparison depends on number of respondent groups to be compared. Independent samples *t*-test is applied if there are two groups to be compared (Sekaran, 2003; Field, 2009). ANOVA is used to compare groups (more than two) (Sekaran, 2003; Field, 2009). In this study respondents were compared for gender and employment status using the independent samples *t*-test, and for "age, length of service and qualification" analysis of variance (ANOVA) test was used. Results were considered significant at $p < .05$.

Hypotheses Testing

Although there are many statistical programs capable of carrying out regression based analysis. However, other than PROCESS, most of the statistics and related inferential procedures necessitate further calculations that are not automatically carried out as a routine, such as while quantifying indirect effects the multiplication of regression coefficients, in moderation analysis via using pick-a-point method the derivation of standard errors and simple slopes, and computation of regions of significance (Hayes, 2012). Whereas, some procedures that are mostly advocated necessitate repeated computations which are only possible by the computers e.g., bootstrapping for constructing confidence intervals of indirect effects in mediation models. Although, structural equation modeling (SEM) programs including Mplus, EQS and AMOS offer some options to be utilized, but these involve specific programming expertise, as code is required to be particularly tailored to task, data set available and must be adapted based on user needs (Hayes, 2012). Nevertheless, several macros and computational aides are available for assistance, yet are dispersed all over the literature each accomplishing few specialized tasks.

Noticeably, utilizing path-analysis framework analogous to approaches given by Preacher et al. (2007) and Edwards and Lambert (2007), PROCESS make available several capabilities of prevalent tools and programs while increasing the complexity and number of models that even combine mediation and moderation, in single easy to use command (for SPSS). In addition to the estimation of OLS regression coefficients, PROCESS also generates direct as well as indirect effects for mediation and conditional effects for moderation models (Hayes, 2012). Offering a set of models this program

estimate all models described by Preacher and Hayes (2004, 2008), Muller et al. (2005), Preacher et al. (2007), Kraemer et al. (2008), Hayes and Matthes (2009), Fairchild and MacKinnon (2009), Edwards and Lambert (2007), Hayes et al. (2011) among others (Hayes, 2012). A remarkable strength of this data analysis tool (i.e., PROCESS) is the ease via which an analyst can specify a model to estimate various mediated and/or moderated effects (Hayes, 2012).

In the previous literature, many researchers used PROCESS to test study hypotheses that involve total, mediating and moderating effects (e.g., Ma et al., 2013; Qian et al., 2016; Chen & Hou, 2016; Newman et al., 2017; Gkorezis et al., 2016; Hu & Jiang, 2016; Tu & Lu, 2016; Esch et al., 2016), demonstrating PROCESS as a suitable data analysis tool. Following the prior scholars, current research also used PROCESS macros in SPSS to test the proposed relationships among study variables. Results were considered significant at $p < .05$.

Direct and mediation hypotheses. To test the direct (or simple) and mediation hypotheses, methodology of Preacher and Hayes (2004) was applied in the current research using PROCESS in SPSS. In this procedure mediation was tested following Baron and Kenny (1986) widely adopted recommendations such that, mediation is confirmed if (i) independent variable (IV) significantly relates to dependent variable (DV); (ii) IV significantly relates to mediating variable; (iii) mediating variable significantly relates to DV; and, (iv) when DV is regressed on both of the IV and mediating variable, the IV no longer relates to DV (i.e., full mediation) or lessened predicting DV (i.e., partial mediation).

Moreover, in the present study, along with the traditional 4-step approach of Baron and Kenny (1986), significance of indirect effect (of IV on DV) was also tested as a necessary component of mediation to occur, as PROCESS also facilitates the estimation of indirect effect using normal theory approach and bootstrap approach. According to Preacher and Hayes (2004) suggestions, in this research the 95% CI (obtained using 5000 bootstrap samples) for the indirect effect excluding zero indicated that the indirect effect is significantly differ from zero and mediation has occurred. Whereas, statistically significant Sobel test results further confirmed mediation. In PROCESS bootstrapping was also used to check for statistical significance as it provides beta regression coefficients along with 95% CIs from repeated sampling database (in the present research for 5000 repeated samples). Therefore, in this study significant regressions were also indicated by confidence intervals (of parameters) excluding zero.

Moderation hypotheses. To test the moderation hypotheses, methodology of Hayes (2013) was applied in this study using PROCESS program in SPSS. In this research two essential conditions (for testing moderation) defined by Baron and Kenny (1986) were followed i.e., (i) IV significantly relates to DV; and, (ii) when both the IV and moderating variable were entered, the interaction term (IV × moderating variable) significantly relates to DV. In PROCESS while testing hypotheses involving moderation, the IV and moderating variable were mean centered before proceeding with analysis, for reducing multicollinearity. As PROCESS also uses bootstrapping to check for statistical significance and provides beta regression coefficients along with 95% confidence intervals (using 5000 repeated sampling database in this research). Therefore, in current

research significant regression results were also indicated by confidence intervals (of parameters) excluding zero.

Chapter Summary

This chapter was about research methodology of present research. More explicitly, this chapter was comprised of operational definitions of study variables/constructs, details of study respondents (the targeted population and sample considered in this research), data collection tool used in this study, data collection procedure and finally details of statistical techniques utilized in present research to test proposed hypotheses. The subsequent chapter will provide a detailed respondents' profile, results of validity and reliability analyses for predeveloped scales being used in the current study, descriptive statistics and demographic groups comparison on study variables to provide basis for hypotheses testing.

Chapter Four: Descriptive Analysis

The prior chapter has given an exhaustive overview of research methodology. This chapter is about respondents' profile, validity and reliability of predeveloped scales, descriptive statistics and demographic groups' comparison. It is divided into six parts. The first section encompasses details regarding respondents' profile that include frequencies and percentages of participants' demographic data. Second part of this chapter is about determining goodness of measures being used in the current research through testing validity and reliability of scales. Results regarding validity and reliability of scales are concluded in the third part. Fourth part covers descriptive statistics. Fifth part provides comparison between demographic groups to determine demographic differences on ethical leadership (EL), voice behavior (VB), innovative work behavior (IWB), psychological empowerment (PE), leader-member exchange (LMX), job performance (JP) and locus of control (LOC). Last part is the summary of this chapter.

Respondents Profile

Respondents profile show proportion of each demographic group in the study sample. It is provided to determine the extent to which the data is balanced in terms of demographic groups' participation. The respondents' profile for current research sample is given in following Table.

Table 4.1

Respondents Profile

Demographic variable	Frequency (*f*)	Percentage (%)
Gender		
Male	302	59.4
Female	206	40.6
Total	508	100.0
Age group (years)		
20-26	38	7.5
27-33	178	35.0
34-40	169	33.3
41-47	61	12.0
48 or above	62	12.2
Total	508	100.0
Qualification		
Bachelor	30	5.9
Master	66	13.0
M.Phil	194	38.2
Ph.D	218	42.9
Total	508	100.0
Length of service (years)		
5 or less	262	51.6
6-10	110	21.7
11-15	73	14.4
16-20	21	4.1
21 or above	42	8.2
Total	508	100.0
Employment status		
Contractual	176	34.6
Permanent	332	65.4
Total	508	100.0

A Sample of 508 researchers was taken from ten government research institutions (for poultry, veterinary, agriculture, health and medicine related research) located in four major cities (Islamabad, Rawalpindi, Lahore and Faisalabad) of Pakistan. Both the male and female researchers were considered constituting 59.4% and 40.6% of the total sample respectively. Representation of female participants was relatively lesser because of lower level of interest in completing research questionnaire. Another reason for lower percentage of female participants is the overall high proportion of male employees in research specific institutions.

Representation of each age group in the study sample is given in Table 4.1. Most respondents belong to age series of 27-40 (two age groups of 27-33 and 34-40 with 35.0% and 33.3% representation respectively). Whereas, there were few junior researchers working in the selected institutions therefore, only 7.5% of the participants were from the age group of 20-26. Most respondents were having M.Phil (38.2%) or Ph.D (42.9%) level qualification. Since, research as an occupation requires higher education.

The researchers having more than 1 year of job experience were considered for collecting primary data. Participants were divided into five groups based on length of service. Maximum respondents (51.6%) were having 5 years or less job experience. Since, the young scientists were more willing and motivated to participate for the research purposes. Whereas, senior researchers (having more than 16 years of job experience) had lowest response rate (12.3%) because most of them were belonging to higher positions and were preoccupied with multiple responsibilities. Therefore, most of them were unable to participate.

Data was collected from both the contractual and permanent researchers employed in the selected institutions. Since, government institutions initially recruit individuals on contract basis and later on offer permanent positions on the basis of performance. The sample of this research is comprised of 34.6% contractual and 65.4% permanent employees working in government research institutes.

Validity and Reliability of Study Scales

Validity

Validity of instruments is tested to ascertain how well the particular scales measure the concepts they are actually intended to measure (Sekaran, 2003). In order to test validity of predeveloped scales being used in the present research two approaches were used (a) correlational analysis; and, (b) factor analysis.

Correlational analysis. Construct validity and internal consistency of study scales was determined via calculating item total correlations and total scale correlations. Item total correlations were calculated to see how significantly items are measuring the respective constructs. For that purpose, items of each scale were correlated with corresponding scale or subscale (or factor) total. Total scale correlations were computed for psychological empowerment scale and locus of control scale via correlating respective factors with the corresponding total score.

Item total correlations. Item total correlations for EL scale, VB scale, IWB scale, PE scale, LMX scale, JP scale and LOC scale are given below (in table 4.2 to table 4.8).

Table 4.2

Item Total Correlation of Ethical Leadership Scale

Item no.	*r*	Item no.	*r*
1	.71**	6	.85**
2	.74**	7	.79**
3	.77**	8	.84**
4	.68**	9	.82**
5	.85**	10	.73**

Note. $N = 508$.
**$p < .01$. *$p < .05$. sig (2-tailed)

Above table showed that EL scale items have positive and significant correlations with corresponding scale (ranging from .68 to .85). This manifestly indicated that scale is internally consistent and all items duly contribute toward measurement of ethical leadership. High significant item total correlations indicated valid construction of the scale with all items measuring single construct. Item total correlations for VB scale are given below.

Table 4.3

Item Total Correlation of Voice Behavior Scale

Item no.	*r*	Item no.	*r*
1	.71**	4	.73**
2	.80**	5	.75**
3	.79**	6	.72**

Note. $N = 508$.
**$p < .01$. *$p < .05$. sig (2-tailed)

All items of VB scale are positively and significantly correlated with corresponding scale (ranging from .71 to .80). Significant positive correlations indicated

internal consistency and valid construction of the scale. Moreover, it endorsed that all items appropriately contribute in the measurement of voice behavior. Item total correlations for innovative work behavior scale are given below.

Table 4.4

Item Total Correlation of Innovative Work Behavior Scale

Item no.	*r*	Item no.	*r*
1	.74**	4	.73**
2	.81**	5	.80**
3	.80**	6	.76**

Note. $N = 508$.
**$p < .01$. *$p < .05$. sig (2-tailed)

All items of innovative work behavior scale are significantly correlated with overall score of IWB (ranging from .73 to .81). High significant positive correlations indicated that the scale is internally consistent and has valid construction. Moreover, all items of the scale are significantly contributing for measuring innovative work behavior as a single construct. Item total correlations for psychological empowerment scale are given below.

Table 4.5

Item Total Correlation of Psychological Empowerment Scale

Meaning		Competence		Self-determination		Impact	
Item no.	*r*	Item no.	*r*	Item no.	*r*	Item no.	*r*
1	.87**	4	.90**	7	.79**	10	.83**
2	.91**	5	.90**	8	.88**	11	.94**
3	.89**	6	.84**	9	.86**	12	.93**

Note. $N = 508$.
**$p < .01$. *$p < .05$. sig (2-tailed)

Each item of psychological empowerment scale was positively and significantly correlated with respective subscale (i.e., four factors). High significant item total correlations (ranging from .79 to .94) indicate internal consistency and valid construction of psychological empowerment scale. Item total correlations for leader-member exchange scale are given below.

Table 4.6

Item Total Correlation of Leader-Member Exchange Scale

Item no.	*r*	Item no.	*r*
1	.65**	5	.71**
2	.80**	6	.75**
3	.79**	7	.78**
4	.80**		

Note. $N = 508$.
**$p < .01$. *$p < .05$. sig (2-tailed)

All items of leader-member exchange scale are positively and significantly correlated with corresponding scale. High significant correlations (ranging from .65 to .80) indicated internal consistency and valid construction of the scale. Moreover, results revealed that items have significant contribution for measurement of leader-member exchange as a single construct. Item total correlations for JP scale are as under.

Table 4.7

Item Total Correlation of Job Performance Scale

Item no.	*r*	Item no.	*r*
1	.66**	7	.73**
2	.71**	8	.73**
3	.75**	9	.72**
4	.75**	10	.74**
5	.71**	11	.75**
6	.71**		

Note. $N = 508$.
**$p < .01$. *$p < .05$. sig (2-tailed)

Items of JP scale have significant correlations with the respective total (lowest is .66, highest is .75). High significant positive correlations indicated internal consistency and valid construction of job performance scale. Results indicated that items contributed significantly for the measurement of job performance as a single construct. Item to total correlations for LOC scale are as under.

Table 4.8

Item Total Correlation for Locus of Control Scale

Internal LOC		External LOC	
Item no.	*r*	Item no.	*r*
1	.71**	5	.60**
2	.71**	6	.62**
3	.65**	8	.70**
4	.49**	9	.74**
7	.50**	10	.75**
11	.64**	12	.63**
14	.63**	13	.69**
15	.55**	16	.72**

Note. $N = 508$.
**$p < .01$. *$p < .05$. sig (2-tailed)

Items of LOC scale were significantly and positively correlated with the total scores of respective factors (ranging from .49 to .71 for internal locus of control and .60 to .75 for external locus of control). These significant correlations indicated valid construction and internal consistency of the scale. Moreover, results also shown that items have significant contribution in measurement of internal and external locus of control.

***Total scale correlations*.** Total scale correlations were computed for psychological empowerment scale (as having four subscales) and locus of control scale (as having two factors). Total scale correlations for psychological empowerment scale and locus of control scale are reported below in Tables 4.9 and 4.10 respectively.

Table 4.9

Total Scale Correlation of Psychological Empowerment Scale

Scale	Psychological empowerment
Meaning	.70**
Competence	.73**
Self-determination	.80**
Impact	.70**

Note. $N = 508$.
**$p < .01$. *$p < .05$. sig (2-tailed)

Above table showed that four subscales have significant correlation with overall score of psychological empowerment and the four subscales duly contribute for measurement of corresponding construct. High significant correlation coefficients indicated that psychological empowerment scale has valid construction and is internally consistent.

As the results showed that four subscales were significantly and highly correlated with the total score, therefore in the present research, following Seibert et al. (2011), Zhang and Bartol (2010) and Newman et al. (2017), the four subscales were combined to form a unitary construct of PE. Since, Seibert et al. (2011) in their meta-analytic review suggested that in organizational settings the four cognitions are expected to occur together; therefore, these four should be combined to measure a unitary construct of psychological empowerment. Total scale correlations for LOC scale are reported below.

Table 4.10

Total Scale Correlations for Locus of Control Scale

Scale	LOC
Internal LOC	.46**
External LOC	.79**

Note. $N = 508$.
**$p < .01$. *$p < .05$. sig (2-tailed)

It is clear that both the factors (measuring internal and external LOC) have positive as well as significant correlation with respective total of LOC, indicating valid construction and internal consistency of this scale.

LOC scale contains items written in opposite directions to measure both internal LOC and external LOC. Therefore, LOC scale form two factors, each is containing items written in same direction. This is due to the response patterns to items that vary in extremity and direction producing an artifactual two-factor structure when there are no multiple constructs (Spector et al., 1997). Therefore, following Turban and Dougherty (1994), Muhonen and Torkelson (2004), Johnson et al. (2009) and Elias (2009) average of 16 items was utilized in this research to measure overall locus of control as a single construct. Whereas, low scores on the scale indicate internality and high scores indicate externality.

Confirmatory factor analysis (CFA). To test dimensionality of study scales, respective items of scales were factor analyzed via CFA using AMOS version 22. Confirmatory factor analysis determines how well the study sample support factor structure of scales being used. CFA relies on numerous statistical tests for determining model fit adequacy to data set. In the current research, some model fit indices were also

considered. As for as the chi-square to *df* ratio is concerned it could be as low as 2 (Tabachnick & Fidell, 2007) or as high as 5 (Wheaton et al., 1977). However, a value below 1 indicates a poor model fit (Shadfar & Malekmohammadi, 2013). Whereas, value less than 2 is considered best but chi-square to *df* ratio within the range of 2 to 5 is acceptable (Paswan, 2009).

GFI, AGFI, CFI and NFI values above .95 and closer to 1 indicate good fitting model. However, values greater than .90 for GFI and AGFI (Hair et al., 1998), for CFI (Hu & Bentler, 1999), and for NFI (Bentler & Bonett, 1980) indicate acceptable model fit. In the present research RMSEA value is interpreted according to studies of Steiger (1990), Browne and Cudeck (1992), MacCallum et al. (1996) and Fabrigar et al. (1999) as: value less than .05 specify a close fit, between .05 to .08 shows fair fit, from .08 to .10 indicates a mediocre fit, and if its value exceed .10 than it shows a poor fit between model and data at hand. Whereas, standardized RMR (SRMR) value below .08 is acceptable for any good fitting model (Hu & Bentler, 1999). Moreover, following Stevens (2002) and Field (2009) factor loading $\geq$ .30 was considered as cut off criteria in the present study to determine that a particular item substantially load on the respective factor. The results of CFA are stated in table 4.11 to table 4.24. Factor loadings of CFA for EL scale are given in table 4.11 below.

Table 4.11

Factor Loadings for Items of Ethical Leadership Scale

Item no.	Loadings
1	.66
2	.69
3	.74
4	.65
5	.85
6	.86
7	.74
8	.81
9	.78
10	.65

Note. N = 508.

Table 4.11 above shows factor loadings for all the items of ethical leadership scale. It is evident that all items meet the inclusion criteria with factor loadings ranging from .65 to .86. CFA model fit indices for ethical leadership scale are reported below.

Table 4.12

CFA Model Fit Indices for Ethical Leadership Scale

χ^2	*df*	GFI	AGFI	CFI	NFI	RMSEA	SRMR
64.078	31	.976	.957	.990	.980	.046	.021

Note. N = 508.

Table 4.12 showed that CFA confirmed the factor structure of ethical leadership scale for Pakistani sample with model fit indices χ^2/df=2.067, GFI=.976, AGFI=.957, CFI=.990, NFI=.980, RMSEA=.046 and SRMR=.021 indicating a good fit. Results

indicated that ethical leadership scale is a statistically valid scale. Factor loadings of CFA for VB scale are given as under.

Table 4.13

Factor Loadings for Items of Voice Behavior Scale

Item no.	Loadings
1	.66
2	.83
3	.76
4	.53
5	.59
6	.54

Note. N = 508.

Standardized factor loadings for VB scale items suggested that all items of scale fulfilled inclusion criteria with loadings ranging from .53 to .83. CFA model fit indices for voice behavior scale are as below.

Table 4.14

CFA Model Fit Indices for Voice Behavior Scale

χ^2	*df*	GFI	AGFI	CFI	NFI	RMSEA	SRMR
14.543	5	.990	.960	.992	.988	.061	.020

Note. N = 508.

Table 4.14 showed that CFA confirmed the factor structure of voice behavior scale for Pakistani sample with model fit indices χ^2/df=2.909, GFI=.990, AGFI=.960, CFI=.992, NFI=.988, RMSEA=.061 and SRMR=.020 indicating a fair model fit. Findings suggested that the scale is statistically valid to measure individual's voice behavior. Factor loadings of CFA for IWB scale are as under.

Table 4.15

Factor Loadings for Items of Innovative Work Behavior Scale

Item no.	Loadings
1	.69
2	.82
3	.79
4	.55
5	.67
6	.71

Note. N = 508.

Table 4.15 provided the standardized factor loadings for the items of innovative work behavior scale. It became clear that all the items fulfilled inclusion criteria with factor loadings ranging from .55 to .82. CFA model fit indices for IWB scale are as under.

Table 4.16

CFA Model Fit Indices for Innovative Work Behavior Scale

χ^2	*df*	GFI	AGFI	CFI	NFI	RMSEA	SRMR
20.042	8	.987	.966	.991	.985	.054	.021

Note. N = 508.

Table 4.16 showed that CFA confirmed the factor structure of innovative work behavior scale for Pakistani sample with model fit indices χ^2/df=2.505, GFI=.987, AGFI=.966, CFI=.991, NFI=.985, RMSEA=.054 and SRMR=.021 indicating a fair model fit. These findings suggested that the scale is statistically valid to measure innovative work behavior. CFA results for standardized factor loadings of PE scale are as under.

Table 4.17

Factor Loadings for Items of Psychological Empowerment Scale

Item no.	Loadings
Meaning	
1	.78
2	.86
3	.86
Competence	
4	.93
5	.87
6	.63
Self-Determination	
7	.65
8	.84
9	.76
Impact	
10	.70
11	.95
12	.89

Note. N = 508.

Table 4.17 shows CFA results for psychological empowerment scale. All items of the scale fulfil the inclusion criteria with standardized factor loadings ranging from .63 to .95. CFA model fit indices for PE scale are as under.

Table 4.18

CFA Model Fit Indices for Psychological Empowerment Scale

χ^2	*df*	GFI	AGFI	CFI	NFI	RMSEA	SRMR
100.454	37	.970	.936	.983	.973	.058	.055

Note. N = 508.

Table 4.18 shows CFA model fit indices χ^2/df= 2.715, GFI=.970, AGFI=.936, CFI=.983, NFI=.973, RMSEA=.058 and SRMR=.055 indicating a good model fit. These findings suggested that scale is statistically valid to measure psychological empowerment with its dimensions measuring four aspects of empowerment. Thus, second-order CFA confirmed factor structure of PE scale for Pakistani sample. Factor loadings of CFA for LMX scale are as under.

Table 4.19

Factor Loadings for Items of Leader-Member Exchange Scale

Item no.	Loadings
1	.54
2	.76
3	.76
4	.78
5	.63
6	.72
7	.75

Note. N = 508.

Above loadings show that all items of LMX scale fulfil the inclusion criteria with loadings ranging from .54 to .78. CFA model fit indices for leader-member exchange scale are as under.

Table 4.20

CFA Model Fit Indices for Leader-Member Exchange Scale

χ^2	*df*	GFI	AGFI	CFI	NFI	RMSEA	SRMR
30.786	14	.982	.964	.989	.979	.049	.022

Note. N = 508.

Table 4.20 showed that CFA results confirmed the factor structure of leader-member exchange scale for Pakistani sample with model fit indices χ^2/df=2.199, GFI=.982, AGFI=.964, CFI=.989, NFI=.979, RMSEA=.049 and SRMR=.022 indicating a good model fit. The findings suggested that scale is statistically valid to measure leader-member exchange. Factor loadings of CFA for JP scale are as under.

Table 4.21

Factor Loadings for Items of Job Performance Scale

Item no.	Loadings
1	.32
2	.36
3	.40
4	.41
5	.41
6	.42
7	.86
8	.86
9	.88
10	.90
11	.89

Note. N = 508.

Above loadings for JP scale items show that the inclusion criterion was fulfilled with loadings ranging from .32 to .90. CFA model fit indices for JP scale are as under.

Table 4.22

CFA Model Fit Indices for Job Performance Scale

χ^2	*df*	GFI	AGFI	CFI	NFI	RMSEA	SRMR
80.016	28	.973	.937	.988	.981	.061	.054

Note. N = 508.

Table 4.22 showed that CFA results confirmed the factor structure of job performance scale for Pakistani sample with model fit indices χ^2/df=2.858, GFI=.973, AGFI=.937, CFI=.988, NFI=.981, RMSEA=.061 and SRMR=.054 indicating a fair

model fit. These findings suggested that scale is statistically valid to measure individual's job performance. Factor loadings of CFA for LOC scale are as under.

Table 4.23

Factor Loadings for Items of Locus of Control Scale

Item no.	Loadings
Internal LOC	
1	.72
2	.82
3	.66
4	.31
7	.47
11	.40
14	.39
15	.36
External LOC	
5	.52
6	.45
8	.65
9	.73
10	.69
12	.64
13	.66
16	.55

Note. $N = 508$.

Findings suggested that all items of the LOC scale fulfil inclusion criteria with loadings stretching from .31 to .82. CFA model fit indices for LOC scale are as under.

Table 4.24

CFA Model Fit Indices for Locus of Control Scale

χ^2	*df*	GFI	AGFI	CFI	NFI	RMSEA	SRMR
195.405	82	.955	.925	.952	.921	.052	.072

Note. N = 508.

Table 4.24 showed that CFA results confirmed the factor structure of locus of control scale for Pakistani sample with model fit indices χ^2/df=2.383, GFI=.955, AGFI=.925, CFI=.952, NFI=.921, RMSEA=.052 and SRMR=.072 indicating a fair model fit. These findings suggested that the scale is statistically valid to measure individual's locus of control.

Reliability

Reliability of scales is assessed to guarantee internal consistency of measures to reflect their respective constructs (Sekaran, 2003; Field, 2009). It shows that measure is without bias and items in the scale hang together for independently measuring the similar concept. Most popular and extensively used test of reliability is Cronbach's coefficient alpha (Sekaran, 2003; Field, 2009). Value of the coefficient nearer to 1 specifies greater reliability of scale. In general scale with Cronbach's alpha coefficient (α) more than .60 should be considered reliable (Sekaran, 2003). In this empirical study alpha coefficients for ethical leadership scale, voice behavior scale, innovative work behavior scale, psychological empowerment scale, leader-member exchange scale, job performance scale and locus of control scale were computed in Table 4.25 below.

Table 4.25

Cronbach's Alpha Reliability Coefficients for Study Scales

Sr. no.	Scale	No. of Items	α
1	Ethical leadership	10	.93
2	Voice behavior	6	.84
3	Innovative work behavior	6	.86
4	Psychological empowerment	12	.87
5	Leader-member exchange	7	.87
6	Job performance	11	.91
7	Locus of control	16	.69

Note. $N = 508$.

Above results showed that ethical leadership scale, voice behavior scale, innovative work behavior scale, psychological empowerment scale, leader-member exchange scale, job performance scale and locus of control scale were internally consistent and reliable (i.e., for all $\alpha > .60$) measures of intended constructs.

Conclusion of Validity and Reliability Analysis

Initially, in the present research, validity and reliability of study scales were determined. The validity of predeveloped scales being used in the present research was established using correlational analysis and confirmatory factor analysis. Item total correlations for study scales were computed to examine how significantly items contribute for measuring the respective constructs. The results showed that items of all research scales were having significant and positive correlations with corresponding total scores. Findings endorsed internal consistency and valid construction of study scales as items were found contributing significantly for the measurement of their respective constructs. Moreover, results of CFA showed a good fit to research data at hand for study

scales. These findings established the construct validity and confirmed the factor structure of all scales being used in this research.

To test reliability of scales, Cronbach's alpha was computed for each of ethical leadership scale, voice behavior scale, innovative work behavior scale, psychological empowerment scale, leader-member exchange scale, job performance scale and locus of control scale. Results showed that alpha values were acceptable for all the measures (see Table 4.25). Hence, results for validity and reliability analysis suggested that all the scales used in this study were valid, internally consistent and reliable measures of intended constructs.

Common Method Bias

As current research utilized self-reported survey for data collection on all study scales, therefore, following Konrad and Linnehan (1995), Zheng et al. (2010), Simonin (1997) and Esch et al. (2016), in the present research Harman's (1960) single factor test was used for assessing the possibility of CMB. Results of principal component analysis yielded 13 factors with eigenvalues more than 1. The 13 factors accounted for 65.51% cumulative variance, the first of which accounted for only 20.02% variance. In line with the Harman's criteria, these results confirmed that CMB was not a serious problem in current research.

Descriptive Statistics

Getting a feel for research data is a necessary earliest step to begin the analysis (Sekaran, 2003). The statistics that provide feel for data includes (a) mean (*M*) and standard deviation (*SD*) for each of the interval-scaled study variable; and, (b) correlations between study variables irrespective of study hypotheses (Sekaran, 2003). In the current study these statistics were calculated using SPSS version 20. The results are given below in table 4.26 and table 4.27.

Mean and Standard Deviation for Interval-Scaled Variables

Examining *M* and *SD* for interval-scaled study variables gives a good indication of how respondents reacted to the items in the scales and how good the measures and respective items are to tap the relevant concepts (Sekaran, 2003). To determine how respondents reacted to the items of EL scale, VB scale, IWB scale, PE scale, LMX scale, JP scale and LOC scale "*M* and *SD*" were computed. The results are as below.

Table 4.26

Mean and Standard Deviation for the Interval-Scaled Study Variables

Sr. no.	Scale	*M*	*SD*
1	Ethical leadership	3.71	.79
2	Voice behavior	4.85	1.08
3	Innovative work behavior	3.81	.65
4	Psychological empowerment	5.54	.79
5	Leader-member exchange	3.51	.73
6	Job performance	5.52	.82
7	Locus of control	3.18	.56

Note. $N = 508$.

Table 4.26 provided with the mean and standard deviation of study variables. Results showed that respondents' perceived EL, VB, IWB, PE, LMX and JP were high. However, scores on LOC scale were slightly skewed toward internality that is consistent with previous researches e.g., Spector (1988), Muhonen and Torkelson (2004).

Correlations between Study Variables

Correlations between study variables provide with the indication that how well the variables are associated with each other i.e., what linear relationship 'if any' exists between variables (Sekaran, 2003; Field, 2009). To determine how the variables are associated with each other in the present research, correlations between ethical leadership, voice behavior, innovative work behavior, psychological empowerment, leader-member exchange, job performance, and locus of control were computed. Results of correlations between interval-scaled study variables are given below in Table 4.27.

Table 4.27

Correlations between Study Variables

Sr. no.	Variable	1	2	3	4	5	6	7
1	Ethical leadership	-						
2	Voice behavior	.17**	-					
3	Innovative work behavior	.25**	.29**	-				
4	Psychological empowerment	.33**	.26**	.40**	-			
5	Leader-member exchange	.72**	.19**	.20**	.37**	-		
6	Job performance	.18**	.33**	.42**	.48**	.20**	-	
7	Locus of control	-.16**	-.10*	-.10*	-.24**	-.20**	-.15**	-

Note. $N = 508$.
**$p < .01$. *$p < .05$. sig (2-tailed)

Table 4.27 above indicated significant ($p < .01$) and positive correlations among ethical leadership, voice behavior, innovative work behavior, psychological empowerment, leader-member exchange and job performance. These results indicated that respondents with high values on perceived ethical leadership, psychological empowerment, leader-member exchange and job performance also reported more voice behavior and innovative work behavior. However, LOC was significantly ($p < .05$) negatively correlated with all other study variables. This indicated that externality is associated with respondents perceiving lower level of ethical leadership, voice behavior, innovative work behavior, psychological empowerment, leader-member exchange and job performance. In general, these correlation results were in line with study hypotheses.

Comparison between Demographic Groups

Comparison between demographic groups of respondents shows the extent to which these groups differ from each other on the particular variables (Sekaran, 2003). Statistical technique/test to be applied for group comparison depends on number of respondent groups to be compared. Independent samples *t*-test is applied if there are two groups to be compared (Field, 2009). For comparing more than two groups ANOVA is utilized (Sekaran, 2003; Field, 2009). In the current study respondents were compared for gender and employment status using the independent samples *t*-test. ANOVA test was applied for comparing demographic groups on the basis of age, qualification and length of service. Results were considered significant at $p < .05$.

Gender

Gender differences on ethical leadership, voice behavior, innovative work behavior, psychological empowerment, leader-member exchange, job performance and locus of control were computed using independent samples *t*-test. The results are provided in Table 4.28 below.

Table 4.28

Mean Differences for Gender Groups on Study Variables

	Gender					
	Male (n = 302)		Female (n = 206)			
Scale	*M*	*SD*	*M*	*SD*	*t* (*df*)	*p*
EL	3.72	.78	3.70	.80	.28 (506)	.78
VB	4.81	1.10	4.90	1.06	-.98 (506)	.33
IWB	3.81	.67	3.81	.62	.02 (506)	.99
PE	5.52	.81	5.57	.75	-.64 (506)	.52
LMX	3.53	.71	3.48	.76	.65 (506)	.52
JP	5.50	.84	5.56	.80	-.88 (506)	.38
LOC	3.19	.57	3.15	.54	.88 (506)	.38

Note. N = 508.

Table 4.28 displays the results showing that on average male respondents reported more perceived ethical leadership and leader-member exchange than female respondents. Whereas, female respondents reported more voice behavior, psychological empowerment, job performance and internal locus of control compared to the male counterparts. However, *t*-test results shown that these differences among male and female respondents on study variables were not significant.

Employment Status

Mean differences for contractual and permanent employees on EL, VB, IWB, PE, LMX, JP and LOC were computed using independent samples *t*-test. The results are provided as below.

Table 4.29

Mean Differences between Contractual and Permanent Employees on Study Variables

	Employment status					
	Contractual (n = 176)		Permanent (n = 332)			
Scale	*M*	*SD*	*M*	*SD*	*t* (*df*)	*p*
EL	3.80	.80	3.66	.78	1.93 (506)	.05
VB	4.68	1.15	4.93	1.03	-2.53 (506)	.01
IWB	3.77	.67	3.84	.64	-1.19 (506)	.24
PE	5.54	.76	5.54	.80	-.11 (506)	.91
LMX	3.53	.71	3.50	.74	.57 (506)	.57
JP	5.45	.89	5.56	.78	-1.46 (506)	.15
LOC	3.18	.55	3.17	.56	.02 (506)	.98

Note. N = 508.

Table 4.29 shows results revealing that contractual and permanent researchers were significantly different on voice behavior (t (506) = -2.53, p < .05). Permanent employees were significantly high on voice behavior (M = 4.93, SD = 1.03) compared to the contractual employees (M = 4.68, SD = 1.15). The significant difference of contractual and permanent researchers on voice behavior is justified as permanent employees have more job security making them show more involvement and express more voice behavior compared to their contractual colleagues.

Age

The respondents of the current research belong to five age (in years) groups including 20-26, 27-33, 34-40, 41-47 and 48 or above. Mean differences on the basis of age groups for ethical leadership, voice behavior, innovative work behavior, psychological empowerment, leader-member exchange, job performance and locus of control were computed using one-way analysis of variance technique. Results are as below.

Table 4.30

Mean Differences across Age Groups of Respondents on Study Variables

	Age (in years)						
	20-26 (n = 38)	27-33 (n = 178)	34-40 (n = 169)	41-47 (n = 61)	48 or above (n = 62)		
Scale	*M (SD)*	*M (SD)*	*M (SD)*	*M (SD)*	*M (SD)*	*F* (df_1, df_2)	*p*
EL	3.95 (.60)	3.66 (.80)	3.76 (.80)	3.56 (.88)	3.74 (.69)	1.83 (4, 503)	.12
VB	4.58 (1.06)	4.83 (1.03)	4.87 (1.07)	4.69 (1.18)	5.13 (1.14)	1.96 (4, 503)	.10
IWB	3.71 (.53)	3.73 (.67)	3.82 (.62)	3.92 (.71)	4.01 (.63)	2.95 (4, 503)	.02
PE	5.52 (.67)	5.46 (.79)	5.53 (.82)	5.61 (.85)	5.76 (.68)	1.78 (4, 503)	.13
LMX	3.66 (.71)	3.44 (.72)	3.55 (.73)	3.46 (.81)	3.55 (.67)	1.02 (4, 503)	.40
JP	5.22 (1.01)	5.38 (.89)	5.57 (.74)	5.68 (.71)	5.83 (.66)	5.84 (4, 149.56)	.00
LOC	3.24 (.40)	3.17 (.59)	3.14 (.52)	3.15 (.58)	3.25 (.65)	.58 (4, 503)	.68

Note. N = 508. df_1 = between groups, df_2= within groups.

Table 4.30 showed the results of one-way ANOVA, used to examine whether researchers belonging to different age groups significantly differ on perceived ethical leadership, voice behavior, innovative work behavior, psychological empowerment, leader-member exchange, job performance and locus of control. Levene's test revealed that assumption of equal variances was not satisfied for job performance ($p < .05$) across different age groups. However, the results have shown statistically significant mean differences across age groups on innovative work behavior (F (4, 503) = 2.95, $p < .05$) and job performance (Welch's F (4, 149.56) = 5.84, $p < .05$). For innovative work behavior post hoc Hochberg's GT2 procedure (as group sample sizes were very different but group variances were not different) was used to examine pairwise dissimilarities amongst group means. Post hoc test outcomes revealed statistically significant difference among researchers belonging to "48 years or above" age group (M = 4.01, SD = .63) and those belonging to "27-33 years" age group (M = 3.73, SD = .67). Researchers belonging to "48 years or above" age group reported significantly more IWB than those in age group of 27-33. For job performance post hoc Games-Howell procedure (as group variances differ and group sample sizes were also unequal) revealed statistically significant difference between mean of researchers belonging to "48 years or above" age group (M = 5.83, SD = .66), and those belonging to 20-26 age group (M = 5.22, SD = 1.01) and 27-33 age group (M = 5.38, SD = .89). Researchers belonging to "48 years or above" group were significantly greater on JP than those belonging to 20-26 or 27-33 age range. Other groups were not significantly different. These findings reflected that senior researchers reported more innovative work behavior as well as job performance compared to their junior colleagues. Non-significant differences on all other variables

showed that respondents perceived ethical leadership, voice behavior, psychological empowerment, leader-member exchange and locus of control change irrespective of their age.

Qualification

The respondents of the current research were divided into four groups based on qualification (i.e., Bachelor, Master, M.Phil and Ph.D.). Mean differences for four qualification groups on EL, VB, IWB, PE, LMX, JP and LOC were examined using one-way analysis of variance technique. The results are provided as below.

Table 4.31

Mean Differences across Qualification Groups on Study Variables

	Qualification					
	Bachelor (n = 30)	Master (n = 66)	M.Phil (n = 194)	Ph.D. (n = 218)		
Scale	*M (SD)*	*M (SD)*	*M (SD)*	*M (SD)*	$F\ (df_1, df_2)$	p
EL	3.74 (.85)	3.68 (.68)	3.76 (.78)	3.67 (.81)	.53 (3, 504)	.67
VB	4.93 (1.22)	4.57 (1.04)	4.90 (1.04)	4.87 (1.10)	1.76 (3, 504)	.15
IWB	3.84 (.53)	3.61 (.65)	3.74 (.59)	3.93 (.69)	5.63 (3, 504)	.00
PE	5.34 (.76)	5.46 (.75)	5.55 (.75)	5.59 (.83)	1.17 (3, 504)	.32
LMX	3.48 (.74)	3.64 (.62)	3.48 (.76)	3.50 (.73)	.82 (3, 504)	.48
JP	5.44 (.92)	5.43 (.69)	5.49 (.83)	5.60 (.84)	1.09 (3, 504)	.36
LOC	3.25 (.45)	3.23 (.46)	3.17 (.61)	3.15 (.55)	.68 (3, 116.25)	.56

Note. N = 508. df_1 = between groups, df_2= within groups.

Table 4.31 above showed the results of ANOVA, performed to examine whether researchers belonging to different qualification groups significantly differ on perceived ethical leadership, voice behavior, innovative work behavior, psychological empowerment, leader-member exchange, job performance and locus of control. Levene's test revealed that assumption of equal variances was not satisfied for locus of control (p < .05) across different qualification groups. Therefore, for locus of control Welch's F was reported. Whereas, the overall results have shown statistically significant mean differences across qualification groups on innovative work behavior (F (3, 504) = 5.63, p < .05). For innovative work behavior post hoc Hochberg's GT2 procedure (as group sample sizes were very different but group variances were not different) was utilized to inspect pairwise dissimilarities amongst group means. Findings revealed statistically significant pairwise difference for researchers having "Ph.D." degree (M = 3.93, SD =

.69) and those having “M.Phil” (*M* = 3.74, *SD* = .59) or “Master” degree (*M* = 3.61, *SD* = .65). Researchers having “Ph.D.” degree reported significantly higher level of innovative work behavior compared to those having “M.Phil” or “Master” degree. No significant dissimilarities were found among other groups. Thus the findings indicated that researchers with higher level of education contribute more innovatively as compared to others at workplace. These study findings are justified as research profession requires more knowledge and expertise. No significant differences on all other variables showed that respondents perceived ethical leadership, voice behavior, psychological empowerment, leader-member exchange, job performance and locus of control change irrespective of their qualification.

Length of Service

The respondents of the current research were separated into five sets based on their length of service/job experience (i.e., 5 years or less, 6-10, 11-15, 16-20 and 21 years or more). Mean differences for five groups of respondents on perceived EL, VB, IWB, PE, LMX, JP and LOC were examined using one-way analysis of variance technique. The results are provided below.

Table 4.32

Mean Differences across Respondents Length of Service Groups on Study Variables

	Length of service (years)						
	5 or less (*n* = 262)	6-10 (*n* = 110)	11-15 (*n* = 73)	16-20 (*n* = 21)	21 or above (*n* = 42)		
Scale	*M (SD)*	*M (SD)*	*M (SD)*	*M (SD)*	*M (SD)*	*F* (df_1, df_2)	*p*
EL	3.77 (.79)	3.63 (.84)	3.70 (.70)	3.63 (.78)	3.64 (.78)	.75 (4, 503)	.56
VB	4.77 (1.05)	4.74 (1.15)	5.00 (1.06)	5.30 (.84)	5.13 (1.15)	2.67 (4, 503)	.03
IWB	3.81 (.62)	3.74 (.74)	3.82 (.56)	3.94 (.69)	3.94 (.69)	1.00 (4, 503)	.41
PE	5.51 (.70)	5.55 (.97)	5.57 (.73)	5.43 (1.00)	5.73 (.73)	.86 (4, 503)	.49
LMX	3.50 (.75)	3.48 (.75)	3.57 (.65)	3.54 (.60)	3.49 (.75)	.19 (4, 503)	.95
JP	5.44 (.86)	5.44 (.90)	5.69 (.58)	5.62 (.85)	5.91 (.56)	6.52 (4, 100.17)	.00
LOC	3.17 (.53)	3.13 (.62)	3.21 (.54)	3.04 (.61)	3.32 (.57)	1.34 (4, 503)	.25

Note. N = 508. df_1 = between groups, df_2= within groups.

Table 4.32 showed the results of ANOVA, performed to examine whether researchers in different groups (based on length of service) significantly differ on perceived ethical leadership, voice behavior, innovative work behavior, psychological empowerment, leader-member exchange, job performance and locus of control. Levene's test revealed that assumption of equal variances was violated for job performance ($p < .05$). However, results have shown statistically significant mean differences across five groups on voice behavior (F (4, 503) = 2.67, $p < .05$) and job performance (Welch's F (4, 100.17) = 6.52, $p < .05$). For voice behavior post hoc Hochberg's GT2 procedure (as group sample sizes were very different but group variances were not different) was utilized to inspect pairwise dissimilarities among group means. Test output revealed no significant pairwise dissimilarities amongst group means on voice behavior. For job performance post hoc Games-Howell procedure (was used as group variances differ and group sample sizes were also unequal) revealed statistically significant pairwise differences for researchers with 5 years or less (M = 5.44, SD = .86) length of service, and those with 6-10 years (M = 5.44, SD = .90) length of service, and those with 11-15 years (M = 5.69, SD = .58) length of service, and with 21 years or more (M = 5.91, SD = .56) length of service. Researchers having 11-15 years of job tenure were significantly high on JP than those having 5 years or less job experience. Moreover, researchers having more than 21 years of job experience were significantly higher than those having job experience 10 years or less (two groups "5 years or less" and "6-10"). Such results reflected that researchers with more length of service and job experience perform job related tasks better than their junior colleagues.

Chapter Summary

Above chapter covered analysis about respondents' profile, validity and reliability of measures, descriptive statistics and demographic groups' comparison. Respondents' profile (including frequencies and percentages for demographic groups) was provided for an overview of demographic groups' presentation in the study sample of 508 researchers. Correlational analysis and CFA were utilized for confirmation of factor structure and validation of study scales for Pakistani sample. Reliability analysis was utilized to ascertain internal consistency of measures. Results of correlational analysis, CFA and reliability analysis revealed that scales used in this research were valid, reliable and internally consistent measures of respective constructs. Moreover, in this chapter Harman's one-factor test was also conducted. Results suggested that CMB was not a serious issue in present research.

Descriptive statistics including *M* and *SD* for interval-scaled study variables were computed to give an idea of how respondents reacted to the items in the scales and how good the measures and respective items were to tap the relevant concepts. Moreover, to show the general associations between study variables and to provide basis for hypotheses testing, correlations between study variables were also computed in the descriptive statistics section of this chapter. Correlation results revealed that all the interval-scaled variables were significantly correlated in the predicted directions in line with research hypotheses.

Lastly in this chapter, mean dissimilarities across demographic groups of respondents' were inspected to show whether these groups differ or not on the variables of interest. Results of *t*-test and ANOVA revealed that only few demographic groups

were considerably and significantly dissimilar from others on some of the study variables. The next chapter is about hypotheses testing.

Chapter Five: Hypotheses Testing

The previous chapter was comprised of respondents' profile, validity and reliability of the scales, mean and standard deviation for the interval-scaled variables, correlations between study variables and comparison between demographic groups. Thus, the preceding chapter provided basis for hypotheses testing. This chapter covers hypotheses testing results to fulfil the objectives of present research. The chapter is subdivided into three parts. The first part covers hypotheses testing. Second part provides with the summary of statistical techniques used for data analysis in current research. Last part comprises the chapter summary.

Hypotheses Testing

In the previous chapter, bivariate correlations between study variables were computed to access magnitude (shown by the value of correlation coefficient) and direction (shown by the sign of correlation coefficient) of relationship among study variables. Results suggested that variables were related in the expected directions. The findings of correlational analysis provided preliminary support for the direct hypotheses as ethical leadership was found to have significant positive correlations with voice behavior ($r = .17$, $p < .01$) and innovative work behavior ($r = .25$, $p < .01$). Since, inter-relationships between variables were established based on the bivariate correlations, study hypotheses were tested using PROCESS (an add-on for SPSS). Results were considered statistically significant for $p < .05$.

Direct and Mediation Hypotheses

To test the direct and mediation hypotheses, methodology of Preacher and Hayes (2004) was applied using PROCESS program. This procedure of testing mediation

followed Baron and Kenny (1986) widely adopted recommendations. The mediation was confirmed if (i) independent variable significantly relates to dependent variable; (ii) independent variable significantly relates to mediating variable; (iii) mediating variable significantly relates to dependent variable; and, (iv) when dependent variable is regressed on both of the independent and mediating variables, the independent variable no longer relates to dependent variable (i.e., full mediation) or lessened predicting dependent variable (i.e., partial mediation).

Along with this traditional 4-step approach, PROCESS tests the significance of indirect effect as a necessary component of mediation to occur, it also facilitates the estimation of indirect effect using normal theory approach (i.e., Sobel test) and bootstrap approach. 95% confidence interval (using 5000 bootstrap samples) for the indirect effect excluding zero indicate that the indirect effect is significantly differ from zero and mediation has occurred. Whereas, statistically significant Sobel test results further confirm mediation.

PROCESS also uses bootstrapping to check for statistical significance. It provides beta regression coefficients along with 95% confidence intervals (CI) from 5000 repeated sampling database. In PROCESS significant regressions are indicated by confidence intervals (of parameters) excluding zero.

Ethical leadership, psychological empowerment and voice behavior. Results for the relationship between ethical leadership, psychological empowerment and voice behavior are given in Table 5.1 below.

Table 5.1

Psychological Empowerment Mediates the Relationship between Ethical Leadership and Voice Behavior

Variable	VB (Model-1)				PE (Model-2)				VB (Model-3)			
	B	SE	*t*	95% CI	*B*	SE	*t*	95% CI	*B*	SE	*t*	95% CI
Constant	3.819***	.267	14.287	[3.293, 4.344]	4.227***	.186	22.723	[3.862, 4.593]	2.481***	.371	6.684	[1.752, 3.210]
Gender	.100	.096	1.037	[-.089, .289]	.052	.067	.776	[-.080, .184]	.084	.094	.887	[-.102, .269]
EL	.239***	.060	3.961	[.120, .357]	.334***	.042	7.967	[.252, .417]	.133*	.063	2.129	[.010, .256]
PE									.317***	.062	5.070	[.194, .439]
	$R = .179$, $R^2 = .032$, $F = 8.332$, $p < .001$				$R = .335$, $R^2 = .112$, $F = 31.965$, $p < .001$				$R = .281$, $R^2 = .079$, $\Delta R^2 = .047$, $F = 14.395$, $p < .001$			

Note. $N = 508$. Bootstrap sample = 5000. EL = ethical leadership, VB = voice behavior, PE = psychological empowerment, CI = confidence interval.
*$p < .05$. **$p < .01$. ***$p < .001$. sig (2-tailed)

Hypothesis 1 of the present research proposed that ethical leadership positively relates to voice behavior. Supporting the study proposition, results of Model-1 in Table 5.1 indicated that ethical leadership positively and significantly relates to voice behavior (B = .239, p < .001, 95% CI [.120, .357]). Therefore, first hypothesis was confirmed. Similarly, results of the Model-2 in Table 5.1 showed that ethical leadership and psychological empowerment are significantly and positively related (B = .334, p < .001, 95% CI [.252, .417]). Thus, hypothesis 3 was also confirmed.

Hypothesis 4 of current research postulated that psychological empowerment is a mediator to ethical leadership and voice behavior relationship. Results for hypothesis 1 and hypothesis 3 showed that ethical leadership positively and significantly relates to voice behavior and psychological empowerment. Moreover, in a regression using bootstrapping, psychological empowerment was also found to positively and significantly relate to voice behavior (B = .361, p < .001, 95% CI [.245, .477]). However, as given in Model-3 of Table 5.1, when both ethical leadership and psychological empowerment were simultaneously entered, ethical leadership was lessened predicting voice behavior (B = .133, p < .05, 95% CI [.010, .256]), yet psychological empowerment was still significantly and positively related to voice behavior (B = .317, p < .001, 95% CI [.194, .439]). These results were in line with the most widely adopted recommendations (for mediation) of Baron and Kenny (1986). These findings suggested that psychological empowerment partially mediates the link among ethical leadership and voice behavior. In addition to Baron and Kenny (1986) 4-step procedure, 95% confidence interval (using 5000 bootstrap samples) was also examined for the indirect effect of ethical leadership on voice behavior. Results showed that the indirect effect was significantly different from

zero (with indirect effect = .106, Boot SE = .032, 95% CI [.053, .180]). Moreover, the Sobel test (with z = 4.254, $p < .001$) results also confirmed mediation. Hence, hypothesis 4 of present research was supported.

Ethical leadership, psychological empowerment and innovative work behavior. Results for the impact of ethical leadership on innovative work behavior considering psychological empowerment as mediator to the proposed relationship are given in Table 5.2 below.

Table 5.2

Psychological Empowerment Mediates the Relationship between Ethical Leadership and Innovative Work Behavior

Variable	IWB (Model-1)				PE (Model-2)				IWB (Model-3)			
	B	SE	*t*	95% CI	*B*	SE	*t*	95% CI	*B*	SE	*t*	95% CI
Constant	3.033***	.158	19.250	[2.723, 3.342]	4.227***	.186	22.723	[3.862, 4.593]	1.780***	.210	8.471	[1.367, 2.192]
Gender	.003	.057	.057	[-.108, .115]	.052	.067	.776	[-.080, .184]	-.012	.053	-.229	[-.117, .093]
EL	.209***	.036	5.872	[.139, .279]	.334***	.042	7.967	[.252, .417]	.110**	.035	3.099	[.040, .179]
PE									.297***	.035	8.390	[.227, .366]
	$R = .253$, $R^2 = .064$, $F = 17.241$, $p < .001$				$R = .335$, $R^2 = .112$, $F = 31.965$, $p < .001$				$R = .423$, $R^2 = .179$, $\Delta R^2 = .115$, $F = 36.535$, $p < .001$			

Note. $N = 508$. Bootstrap sample = 5000. EL = ethical leadership, IWB = innovative work behavior, PE = psychological empowerment, CI = confidence interval. *$p < .05$. **$p < .01$. ***$p < .001$. sig (2-tailed)

It was hypothesized that ethical leadership positively relates to innovative work behavior (hypothesis 2). In line with the research proposition, results of Model-1 in Table 5.2 showed that ethical leadership significantly and positively relates to innovative work behavior (B = .209, p < .001, 95% CI [.139, .279]). Therefore, second hypothesis of the current study was supported.

Hypothesis 5 of this study is about mediating role of psychological empowerment in ethical leadership and innovative work behavior relationship. Research results as given in Model-1 and Model-2 of Table 5.2 indicated that ethical leadership significantly and positively relates to innovative work behavior and psychological empowerment. Furthermore, psychological empowerment was found predicting innovative work behavior significantly and positively (B = .333, p < .001, 95% CI [.267, .399]) in a regression analysis using bootstrapping. However, results as given in Model-3 of Table 5.2 showed that when innovative work behavior was regressed on both ethical leadership and psychological empowerment simultaneously, ethical leadership was lessened predicting innovative work behavior (B = .110, p < .01, 95% CI [.040, .179]), whereas psychological empowerment was still positively and significantly related to innovative work behavior (B = .297, p < .001, 95% CI [.227, .366]). These results were in line with Baron and Kenny's (1986) four recommendations for mediation, suggesting partial mediation of psychological empowerment in ethical leadership and innovative work behavior relationship. Additionally, 95% confidence interval (obtained using 5000 bootstrap samples) for the indirect effect of ethical leadership on innovative work behavior showed that the indirect effect was significantly different from zero (with indirect effect = .099, Boot SE = .025, 95% CI [.058, .156]). Moreover, the Sobel test

results (with z = 5.756, $p < .001$) also confirmed mediation. Hence, hypothesis 5 of current study was also supported.

Ethical leadership, leader-member exchange and voice behavior. Results for the relationship between ethical leadership, leader-member exchange and voice behavior are given in Table 5.3 below.

Table 5.3

Leader-Member Exchange Mediates the Relationship between Ethical Leadership and Voice Behavior

Variable	VB (Model-1)				LMX (Model-2)				VB (Model-3)			
	B	SE	*t*	95% CI	*B*	SE	*t*	95% CI	*B*	SE	*t*	95% CI
Constant	3.819***	.267	14.287	[3.293, 4.344]	1.069***	.127	8.414	[.819, 1.319]	3.598***	.284	12.655	[3.039, 4.156]
Gender	.100	.096	1.037	[-.089, .289]	-.030	.046	-.649	[-.120, .060]	.106	.096	1.105	[-.083, .295]
EL	.239***	.060	3.961	[.120, .357]	.669***	.029	23.315	[.612, .725]	.101	.087	1.164	[-.069, .271]
LMX									.207*	.093	2.216	[.023, .390]
	$R = .179$, $R^2 = .032$, $F = 8.332$, $p < .001$				$R = .720$, $R^2 = .519$, $F = 272.239$, $p < .001$				$R = .203$, $R^2 = .041$, $\Delta R^2 = .009$, $F = 7.234$, $p < .001$			

Note. $N = 508$. Bootstrap sample = 5000. EL = ethical leadership, VB = voice behavior, LMX = leader-member exchange, CI = confidence interval.
*$p < .05$. **$p < .01$. ***$p < .001$. sig (2-tailed)

Hypothesis 6 of present study postulated that ethical leadership positively relates to leader-member exchange. Supporting the study hypothesis, results as given in Model-2 of Table 5.3 showed that ethical leadership positively and significantly relates to leader-member exchange (B = .669, p < .001, 95% CI [.612, .725]). Thus, hypothesis 6 of the current research was supported.

Hypothesis 7 of this research is about mediating role of leader-member exchange in ethical leadership and voice behavior relationship. Results as reported in Model-1 and Model-2 of Table 5.3 showed that ethical leadership significantly and positively relates to voice behavior and leader-member exchange. Moreover, leader-member exchange was found predicting voice behavior significantly and positively (B = .285, p < .001, 95% CI [.158, .412]) in a regression analysis using bootstrapping. However, as given in Model-3 of Table 5.3, when both ethical leadership and leader-member exchange were simultaneously entered, ethical leadership become insignificant predictor of voice behavior (B = .101, p > .05, 95% CI [-.069, .271]), yet, leader-member exchange was still positively and significantly related to voice behavior (B = .207, p < .05, 95% CI [.023, .390]). According to Baron and Kenny's (1986) four recommendations for mediation, these results suggested that leader-member exchange fully mediate the link among ethical leadership and voice behavior. Furthermore, 95% confidence interval (using 5000 bootstrap samples) for the indirect effect of ethical leadership on voice behavior showed that the indirect effect was significantly different from zero (with indirect effect = .138, Boot SE = .070, 95% CI [.001, .277]). Moreover, significant Sobel test result (z = 2.204, p < .05) also confirmed mediation of leader-member exchange. Hence, hypothesis 7 of current study was fully supported.

Ethical leadership, leader-member exchange and innovative work behavior. Results for the mediating role of leader-member exchange in the link between ethical leadership and innovative work behavior are given in Table 5.4 below.

Table 5.4

Leader-Member Exchange as Mediator to Ethical Leadership and Innovative Work Behavior Relationship

Variable	IWB (Model-1)				LMX (Model-2)				IWB (Model-3)			
	B	SE	*t*	95% CI	*B*	SE	*t*	95% CI	*B*	SE	*t*	95% CI
Constant	3.033***	.158	19.250	[2.723, 3.342]	1.069***	.127	8.414	[.819, 1.319]	2.992***	.168	17.776	[2.661, 3.323]
Gender	.003	.057	.057	[-.108, .115]	-.030	.046	-.649	[-.120, .060]	.004	.057	.077	[-.107, .116]
EL	.209***	.036	5.872	[.139, .279]	.669***	.029	23.315	[.612, .725]	.183***	.051	3.575	[.083, .284]
LMX									.038	.055	.691	[-.070, .147]
	$R = .253$, $R^2 = .064$, $F = 17.241$, $p < .001$				$R = .720$, $R^2 = .519$, $F = 272.239$, $p < .001$				$R = .255$, $R^2 = .065$, $\Delta R^2 = .001$, $F = 11.642$, $p < .001$			

Note. $N = 508$. Bootstrap sample = 5000. EL = ethical leadership, IWB = innovative work behavior, LMX = leader-member exchange, CI = confidence interval.
*$p < .05$. **$p < .01$. ***$p < .001$. sig (2-tailed)

Hypothesis 8 of present research suggested leader-member exchange as mediator to ethical leadership and innovative work behavior relationship. Results for Model-1 and Model-2 in Table 5.4 indicated that ethical leadership significantly and positively relates to innovative work behavior and leader-member exchange. Moreover, leader-member exchange was found predicting innovative work behavior significantly and positively (*B* = .180, *p* < .001, 95% CI [.104, .256]) in a regression analysis using bootstrapping. However, as given in Model-3 of Table 5.4, when innovative work behavior was regressed on both ethical leadership and leader-member exchange simultaneously, ethical leadership was found to relate with innovative work behavior significantly and positively (*B* = .183, *p* < .001, 95% CI [.083, .284]), whereas leader-member exchange was found not predicting innovative work behavior significantly (*B* = .038, *p* > .05, 95% CI [-.070, .147]). Therefore, not all of the recommendations of Baron and Kenny (1986) for mediation were satisfied suggesting that leader-member exchange dose not mediate the link between ethical leadership and innovative work behavior. To further confirm whether the mediation has occurred or not the 95% confidence interval (using 5000 bootstrap samples) was examined for the indirect effect of ethical leadership on innovative work behavior. Results confirmed that indirect effect was not significantly different from zero (with indirect effect = .026, Boot SE = .049, 95% CI [-.067, .123]). Moreover, Sobel test result (z = .690, *p* > .05) also indicated no mediation. Thus, hypothesis 8 of the current study was disproved.

Moderation Hypotheses

To test the moderation hypotheses, methodology of Hayes (2013) was applied using PROCESS program in SPSS. In this research two essential conditions (for testing

moderation) outlined by Baron and Kenny (1986) were followed i.e., (i) independent variable significantly relates to dependent variable; and, (ii) when both the independent and moderating variables were entered, the interaction term (independent variable × moderating variable) significantly relates to the dependent variable. In PROCESS while testing hypotheses involving moderation, the independent and moderating variables were mean centered prior to proceeding with the analysis for reducing multicollinearity.

PROCESS also uses bootstrapping to check for statistical significance. It provides beta regression coefficients along with 95% confidence intervals (CI) from 5000 repeated sampling database. In PROCESS significant regressions are indicated by confidence intervals (of parameters) excluding zero.

Ethical leadership, Job performance and voice behavior. Results for moderating role of job performance in the relationship of ethical leadership and voice behavior are given in Table 5.5 below.

Table 5.5

Job Performance Moderates the Relationship between Ethical Leadership and Voice Behavior

Variable	VB (Model-1)			
	B	SE	*t*	95% CI
Constant	4.763***	.139	34.245	[4.490, 5.036]
Gender	.069	.093	.747	[-.113, .251]
EL	.164*	.069	2.384	[.029, .299]
JP	.373***	.064	5.878	[.248, .498]
EL × JP	-.129*	.065	-1.997	[-.255, -.002]
	R = .363, R^2 = .132, F = 19.513, p < .001, (R^2 *increase due to interaction* = .009, *F for increase in* R^2 = 3.988, p < .05)			

Note. N = 508. Bootstrap sample = 5000. EL = ethical leadership, VB = voice behavior, JP = job performance, CI = confidence interval.
*p < .05. **p < .01. ***p < .001. sig (2-tailed)

Hypothesis 9 suggested that job performance moderates the link between ethical leadership and voice behavior such that the positive relationship is stronger for poor performers than for high performers. Results of Model-1 in Table 5.5 indicated that interaction term (i.e., ethical leadership × job performance) was significantly and negatively related to voice behavior (B = -.129, p < .05, 95% CI [-.255, -.002]). According to the criteria of Baron and Kenny (1986), these results (as given in Table 5.5) suggested that hypothesis 9 was supported. Moreover, following the suggestions of Aiken and West (1991) the moderation of job performance was plotted. For this purpose, voice behavior was regressed on ethical leadership for both high (mean + 1 SD) and low (mean – 1 SD) levels of job performance. As shown in Figure 5.1 below, the link between ethical leadership and voice behavior was strong for poor performers (B = .270, p < .001,

95% CI [.112, .428]), whereas this relationship was flat and insignificant for high performers (B = .058, p > .05, 95% CI [-.124, .240]). Thus, hypothesis 9 was further supported.

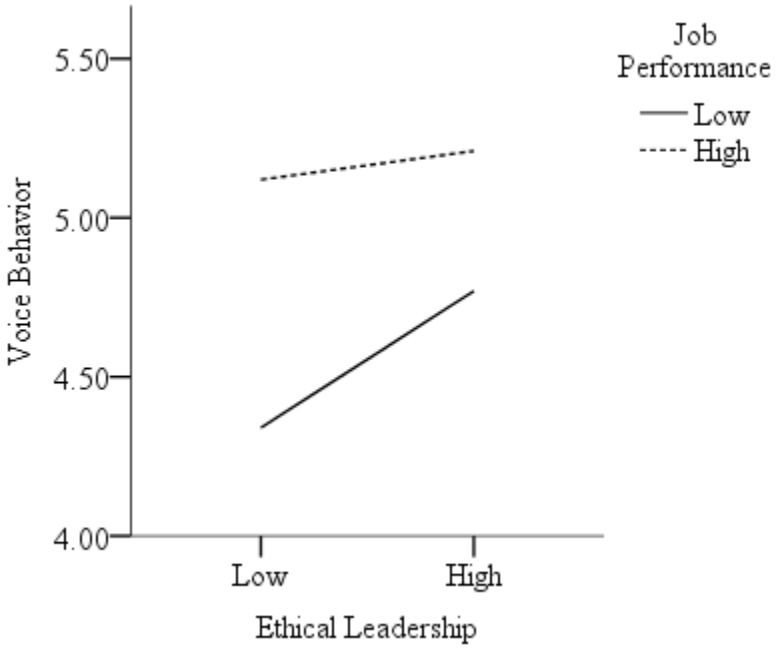


Figure 5.1 *Moderating Role of Job Performance in Ethical Leadership and Voice Behavior Relationship*

Ethical leadership, locus of control and innovative work behavior. Results for the moderating role of locus of control in the relationship of ethical leadership and innovative work behavior are given in Table 5.6 below.

Table 5.6

Locus of Control as Moderator to Ethical Leadership and Innovative Work Behavior Relationship

Variable	IWB (Model-1)			
	B	SE	*t*	95% CI
Constant	3.811***	.088	43.388	[3.639, 3.984]
Gender	-.000	.057	-.001	[-.113, .113]
EL	.201***	.055	3.655	[.093, .309]
LOC	-.068	.065	-1.046	[-.197, .060]
EL × LOC	-.011	.112	-.094	[-.231, .210]
	R = .260, R^2 = .067, F = 4.911, p < .01, (R^2 *increase due to interaction* = .000, *F for increase in* R^2 = .009, p > .05)			

Note. N = 508. Bootstrap sample = 5000. EL = ethical leadership, IWB = innovative work behavior, LOC = locus of control, CI = confidence interval.
*p < .05. **p < .01. ***p < .001. sig (2-tailed)

Hypothesis 10 of the present research postulated that locus of control moderates the relationship between ethical leadership and innovative work behavior such that the positive relationship is stronger for employees with an internal locus of control compared to those with an external locus of control. The results of Model-1 in Table 5.6 indicated that interaction term (i.e., ethical leadership × locus of control) was not significantly related to innovative work behavior (B = -.011, p > .05, 95% CI [-.231, .210]). According to the criteria of Baron and Kenny (1986), these results (as given in Table 5.6) suggested that hypothesis 10 was disproved.

Summary of Hypotheses Testing Results

In the current study ten hypotheses were proposed based on the literature review and research framework. There were four direct hypotheses relating to the role of ethical

leadership in determining voice behavior, innovative work behavior, psychological empowerment and leader-member exchange. Results indicated that all four direct hypotheses were supported. Moreover, there were four mediation hypotheses relating to the mediating role of psychological empowerment and leader-member exchange in the link between ethical leadership and the outcome variables (voice behavior and innovative work behavior). Only one hypothesis out of four mediation hypotheses was disproved indicating that leader-member exchange do not mediate the relationship between ethical leadership and innovative work behavior. Along with the mediating roles, two moderation hypotheses were also tested. Results for moderation hypotheses indicated that job performance moderates the relationship between ethical leadership and voice behavior however, locus of control do not moderate the relationship between ethical leadership and innovative work behavior. Table 5.7 provides with the summary of hypotheses testing results.

Table 5.7

Summary of Hypotheses Testing Results

Sr. no.	Hypothesis	Result
H1	EL is positively related to VB.	Supported
H2	EL is positively related to IWB.	Supported
H3	EL is positively related to PE.	Supported
H4	PE mediates the relationship between EL and VB.	Supported
H5	PE mediates the relationship between EL and IWB.	Supported
H6	EL is positively related to LMX.	Supported
H7	LMX mediates the relationship between EL and VB.	Supported
H8	LMX mediates the relationship between EL and IWB.	Disproved
H9	JP moderates the relationship between EL and VB such that the positive relationship is stronger for poor performers than for high performers.	Supported
H10	LOC moderates the relationship between EL and IWB such that the positive relationship is stronger for employees with an internal locus of control compared to those with an external locus of control.	Disproved

Note. EL = ethical leadership, VB = voice behavior, IWB = innovative work behavior, PE = psychological empowerment, LMX = leader-member exchange, JP = job performance, LOC = locus of control.

Summary of Statistical Techniques Used For Data Analysis

The summary of statistical techniques used in this study for analyzing research data and testing the proposed hypotheses is given in the table 5.8 below.

Table 5.8

Summary of Statistical Techniques Applied

Analysis for	Technique applied
Respondents' profile	Frequency and percentage of each demographic group
Validity	Item total correlation, total scale correlation and confirmatory factor analysis
Reliability	Cronbach's alpha
Descriptive statistics	Mean, standard deviation and correlation between study variables
Demographic differences on study variables	Independent samples *t*-test and one way analysis of variance (ANOVA)
Direct and mediation hypotheses	Methodology of Preacher and Hayes (2004) was applied using PROCESS
Moderation hypotheses	Methodology of Hayes (2013) was applied using PROCESS

Chapter Summary

This chapter provided empirical results for the proposed study hypotheses. In this chapter, following Preacher and Hayes (2004) and Hayes (2013), the PROCESS program was used in statistical package for social sciences (SPSS) to analyze primary data of 508 researchers for testing direct, mediation and moderation hypotheses. Overall ten hypotheses were tested to fulfil research objectives. All except two study propositions were supported by the data at hand. Moreover, this chapter also provided a summary of statistical techniques used in the present research. In this study all statistical techniques, except confirmatory factor analysis (CFA), were applied using SPSS version 20. Whereas, to endorse validity of scales the confirmatory factor analysis was conducted using AMOS (version 22) program. The subsequent chapter is about discussion of

research findings, study contributions, possible implications, study limitations and future research directions. Moreover, in the next chapter this research study will be concluded.

Chapter Six: Discussion and Conclusions

Previous chapter provided results for proposed study hypotheses along with the summary of statistical techniques utilized in current research. This chapter is about discussion of the research findings, study contributions, possible implications, limitations, future research directions and conclusion of the current research. This chapter is subdivided into six parts. In the first part research findings are discussed. Second part encompasses the study contributions. Implications of present research are given in the third part of this chapter. Study limitations and future research directions are provided in the fourth and fifth parts respectively. Finally, present research is concluded in the last part of this chapter.

Discussion of Research Findings

The present research was aimed to test (1) the relationship among ethical leadership and extra-role behaviors of employees (voice behavior and innovative work behavior); (2) the mediating role of psychological empowerment and leader-member exchange in the link of ethical leadership and extra-role behaviors (voice behavior and innovative work behavior); (3) the moderating role of job performance in the link between ethical leadership and voice behavior; and, (4) the moderating role of locus of control in the link between ethical leadership and innovative work behavior. To fulfil study objectives ten hypotheses were proposed based on a detailed literature review and these hypotheses were tested using sophisticated statistical techniques.

This cross-sectional study applied a quantitative survey design using self-reported measures. Step-by-step procedures were followed to check for the validity and reliability (in the local organizational context) of predeveloped scales used in this research.

Confirmatory factor analysis (CFA) showed good model fits to research data at hand for all the measures. Thus, CFA results and correlational analysis provided evidences for validity of all the predeveloped scales used in this research. Whereas, in this research the reliability values for all study scales were above .80, except the locus of control scale. The reliability of locus of control scale was .69 that was a bit lower than the most rigorous criteria of .70 (Nunnally, 1970), however it was also acceptable as exceeded the cutoff criteria of .60 (Sekaran, 2003; Murphy & Davidshofer, 1988; Hair et al., 1992). Hence, results for validity and reliability analyses suggested that all the scales used in this study were valid, internally consistent and reliable measures of intended constructs.

The first hypothesis (H1) anticipated that ethical leadership will be positively related to voice behavior of subordinates. Confirming the first study hypothesis, results of present research showed that ethical leadership positively and significantly relates to voice behavior of followers. These findings were in line with the previous studies, reporting that ethical leadership significantly and positively relates to followers voice behavior at workplace (Avey et al., 2012; Qi & Ming-Xia, 2014; Hassan, 2015; Chen & Hou, 2016; Bai et al., 2017). Hence, the previous studies highlighted the motivational role that ethical leaders paly for encouraging subordinates to voice. However, the current findings are noteworthy as none of the previous researches examined and supported positive linkage between ethical leadership and voice behavior for employees involved in knowledge intensive projects. Present study provided an insight into the situations in which researchers employed in government institutions are likely to get involved in voice behavior for the achievement of overall organizational goals and improvements at workplace. A potential reason for the positive association among ethical leadership and

voice behavior is the subordinates perceived integrity, honesty, trustworthiness, justice, altruism and people orientation of the ethical leader, which provide them with important cues regarding safety and effectiveness of voice, ultimately encouraging them to engage in voice behavior for overall organizational improvements. Secondly, as ethical leaders publically support appropriate work practices and criticize inappropriate procedures, this encourage subordinates to understand that voice behavior is valued and welcomed by their leader. Thus, ethical role modeling is another reason justifying study findings.

Current study results supported second hypothesis (H2) revealing that ethical leadership positively and significantly relates to subordinates engagement in 'new idea (a) adoption or generation; (b) promotion; and, (c) implementation' i.e., innovative work behavior considered in this research (see pages 22 to 24). These findings were consistent with the literature reporting that ethical leadership can positively and significantly encourage employees to engage in innovative work behavior (Yidong & Xinxin, 2013; Dhar, 2016). Present results also consisted with the previous researches (e.g., Ma et al., 2013; Javed et al., 2017; Mehmood, 2016) which suggested that ethical leadership plays a very significant role in guiding workplace behaviors of followers towards creativity (that is a key constituent of innovative work behavior---rather an initial step of overall innovation process) and innovative job performance. A potential reason for positive linkage between ethical leadership and innovative work behavior is, when ethical leader show positive behavior toward subordinates via embedding meaning in the job, highlighting followers job significance, emphasizing open communication at workplace, providing followers with voice and autonomy, respecting others dignity, stimulating employees to practice their potential (Brown & Trevino, 2006) and providing followers

with the opportunities to acquire work related knowledge and skills (Zhu et al., 2004), then the subordinates of ethical leaders become more willing to get engaged in innovative work behavior. Furthermore, just like voice behavior the innovative work behavior is also an extra-role effort that involves high risk and requires more supervisory support. Thus, irrespective of work settings and context differences, ethical leadership is equally important in both public and private sector organizations to encourage followers' innovative work behavior. Since, most features of ethical leadership might be exchangeable across private and public sectors. Yet, based on literature and current research findings it is clear that in contrast with the private segment colleagues, the leaders working in public sector organizations emphasize more on being transparent, selfless, responsive, accountable to society and concerned for communal good. As, public sector focuses on protecting the public good while the private sector relies on private gain.

Study findings supported hypothesis (H3) stating that ethical leadership positively relates to psychological empowerment. These results are consistent with the prior research by Javed et al. (2017) suggesting that ethical leadership significantly contributes towards psychological empowerment of subordinates. Furthermore, the study results also consisted with the findings of Walumbwa et al. (2011), Ma et al. (2013) and Wang et al. (2015) reporting that ethical leadership enhances employee perceived competence and self-impact (the two important components of psychological empowerment construct). Other than Javed et al. (2017), most of the previous studies considered only few aspects of empowerment while examining the linkage between ethical leadership and psychological empowerment. Whereas, present research considered the overall construct

for more generalized findings. The positive linkage concerning ethical leadership and psychological empowerment could be elucidated in numerous ways. First, ethical leaders via considering followers developmental needs, linking their individual tasks to organizational goals, making them experience work-role fit and treating subordinates with respect increase employees sense of meaningfulness of the job (Zhu et al., 2004; De Hoogh & Den Hartog, 2008). Second, as suggested by Zhu et al. (2004) ethical leaders via considering best interest of employees and placing followers in situations facilitating confidence and growth enhances subordinates perceived competence. Lastly, as ethical leaders ask subordinates about "the right things to do" they actually offer followers with an opportunity to actively participate in decision making process that ultimately increase followers' perceived decision influence, autonomy and impact. Hence, present study results showed that ethical leadership is very important to enhance followers' overall psychological empowerment (demonstrated in perceived job meaningfulness, competence, self-determination and self-impact).

Fourth hypothesis (H4) of current research postulated that psychological empowerment mediates the link among ethical leadership and voice behavior. The research results were consistent with this proposition. Although, the management literature is scant with respect to the mediating role of psychological empowerment in ethical leadership and voice behavior relationship. Nevertheless, present study results are consistent with the previous findings (e.g., Wang et al., 2015; Raub & Robert, 2012). In their study for examining association among ethical leadership and voice behavior, Wang et al. (2015) identified self-efficacy and self-impact (two dimensions of overall psychological empowerment construct) as individual-level mediators representing the

underlying psychological process. In the present research, following Seibert et al. (2011) psychological empowerment was considered as comprised of overall perceived meaningfulness of the job, competence (i.e., self-efficacy), self-determination and self-impact. Comparatively, the overall psychological empowerment comprehensively captured the role of ethical leadership. By indicating that psychological empowerment explained the link amongst ethical leadership and voice behavior, present study also empirically supported findings of Raub and Robert (2012) demonstrating psychological empowerment as precursor of voice behavior. Moreover, current study suggested that followers' beliefs regarding job meaningfulness, perceived personal capabilities, self-determination and self-impact are largely determined by ethicality of leaders, and ultimately can inspire, motivate and encourage followers to get involved in extra-role discretionary behavior (i.e., voice) focused to promote organizational effectiveness. Particularly, this research suggested that psychological empowerment is important for voice behavior as the latter involves more risks and necessitates extra efforts. Therefore, present results also confirmed the argument that employees with more empowerment beliefs are more confident to take risks (Liang et al., 2012; Wang et al., 2015). Nevertheless, in this research the mediation of psychological empowerment in the link of ethical leadership and voice behavior was partly supported, suggesting that further research is still needed to fully explain the process.

Supporting the study proposition (i.e., H5), results revealed that psychological empowerment partially mediated the link between perceived ethical leadership and innovative work behavior. Theses research findings are consistent with the previous studies that demonstrated mediating role of psychological empowerment (or its

components) in the association of ethical leadership and workplace creativity. Chughtai (2016) and Javed et al. (2017) found that psychological empowerment mediates the link between ethical leadership and employee creativity (that is same as the idea generation step of overall innovative work behavior). Present study confirmed their findings along with extending the previous work via testing the mediating role of psychological empowerment in the relationship of ethical leadership and innovative work behavior (i.e., different from creativity as it also include idea promotion and idea implementation steps). Ma et al. (2013) demonstrated mediating role of self-efficacy (i.e., a component of overall psychological empowerment construct) while inspecting the effect of ethical leadership on followers creativity. Present study not only supported their findings rather extended their work by examining the mediating role of overall psychological empowerment construct in the proposed association of ethical leadership and innovative work behavior for more generalized results. Moreover, this study also emphasized motivational role of ethical leadership and focused on how ethicality of leadership can encourage followers innovative work behavior by enhancing their psychological empowerment. Research results consistent to the previous studies indicated that irrespective of the context and work settings ethical leadership plays key role to empower employees for encouraging them to get engaged in extra-role efforts (e.g., innovative work behavior).

It was hypothesized that ethical leadership will positively relate to leader-member exchange (i.e., H6). This research hypothesis was supported by the data and the results were also consistent with the previous researches (e.g., Mahsud et al., 2010; Walumbwa et al., 2011; Qian et al., 2017). The current findings are justified as when employees

perceive their leaders being ethical, taking care of followers needs and acting in the best interest of others then such perceptions facilitate and enhance leader-member exchange that is based on mutual support, emotional connection and loyalty.

In this study leader-member exchange was anticipated to mediate the association amongst ethical leadership and voice behavior (i.e., H7). In regard to the underlying mediating mechanism, results of this empirical research provided strong support for proposed hypothesis. Irrespective of the scarce literature relating to the proposed mediating mechanism, these results were in line with the previous researches demonstrating the mediating role of leader-member exchange for transferring the effects of leadership on subordinate's in-role and extra-role workplace behaviors (e.g., Walumbwa et al., 2011; Hsiung, 2012; Newman et al., 2017). However, current research extended the previous work via explicitly focusing on ethical leadership to examine mediating role of leader-member exchange for encouraging subordinates to engage in voice behavior. The present results are justified as just like other positive leadership behaviors, ethical leadership influence followers to develop a strong personal connection based on mutual support, open communication, trust, shared values, loyalty and concern for others, which ultimately encourage subordinates to reciprocate the ethical treatment they received in terms of voice behavior. Particularly, current research suggested that in view of potential risks and costs associated with voice behavior, only higher level of quality leader-member exchange can facilitate subordinates to overcome concerns and fears for freely expressing their opinions. A potential reason for current findings is the target sensitivity of voice behavior as well, that is usually directed toward supervisor (Hsiung, 2012) and without trusting relationship with the supervisor and high quality

leader-member exchange it is not possible for leaders to encourage subordinates to engage in voice behavior.

The research hypothesis that leader-member exchange will mediate the link between ethical leadership and innovative work behavior (i.e., H8) was not supported. Although in the previous studies leader-member exchange was reported as an important mediator to ethical leadership and employee innovative behavior relationship (e.g., Dhar, 2016). However, current results may attribute to the fact that innovative work behavior is an extra-role effort that mostly relates to employee personal capabilities, job knowledge and work involvement. Therefore, ethical leadership exerts no influence on employee innovative work behavior through leader-member exchange. Yidong and Xinxin (2013) further supporting study findings reported that influence of ethical leadership on innovative work behavior is more relevant to motivational aspect of ethical leadership. As, they argued that ethical leadership encourages followers innovative work behavior via motivating them and leading them to improve for the sake of task itself.

It was anticipated that job performance will moderate the relationship between ethical leadership and voice behavior such that the positive relationship will be stronger for poor performers than for high performers (i.e., H9). The analysis results confirmed the proposed moderating role of job performance. It was found that relationship between ethical leadership and voice behavior was substantially stronger for poor performer and was insignificant for high performers. Although there exist no empirical research investigating moderating role of job performance in ethical leadership-voice behavior relationship, literature provide some support for the current study results. For example, Avey et al. (2011) reported strong and significant relationship between ethical leadership

and organizational citizenship behaviors (i.e., extra-role effort just like voice behavior) for employees with lower self-esteem (often a correlate of job performance (Hutman, 1999)) than those with higher self-esteem. In line with the literature, a potential reason for current study findings is the facilitating, positive and caring behavior of ethical leadership that encourages poor performers to suggest required changes for improving organizational effectiveness. Since, individuals who are facing performance issues need more help and motivation from their leader and are likely to perceive themselves safe than their high performing counterparts when being managed by an ethical supervisor. Therefore, when low performing employees perceive their leader being ethical who respect followers dignity (Ciulla, 2004) they feel more comfortable to report issues (that are required to be considered) and give constructive suggestion without any personal threat. This argument is also in line with the Brockner's (1988) suggestion that contextual cues are more significant for individuals with low self-esteem (often a correlate of employee performance). Thus, current results confirmed that the poor performers are more likely to search for and respond to the contextual prompts than high performing colleagues. Moreover, as employees with poor performance are least confident about appropriateness of their behaviors and attitudes, so they are more likely to consider external factors (i.e., ethical leadership) while engaging in voice behavior.

Providing another possible explanation for present study results, Hersey and Blanchard (1982) in their book about situational leadership argued that all employees should not be managed in a similar way. Therefore, when poor performing employees are managed with coaching and supporting behavior they become able to 'run the ball confidently' and voice their concerns and opinions more than others at workplace.

Furthermore, as Walumbwa et al. (2011) reported that followers of ethical leaders are inclined to perform well. Therefore, when poor performers perceive their leader being ethical, they may feel themselves liable as well as safe to convey workplace issues and suggest constructive changes for the sake of improving personal and organizational effectiveness. In summary, the more employees perceive themselves as poor performers, the more voice behavior is influenced by ethical leadership. Whereas, the non-significant relationship between ethical leadership and voice behavior for good performers may attribute to (a) more task focus of good performers; (b) personal abilities of good performers to cope with the issues; and, (c) strong personal status in the organization due to which they express their opinion irrespective of ethicality of supervisor.

Study hypothesis (H10) that locus of control will moderate the relationship between ethical leadership and innovative work behavior was not supported. Although, the reviewed literature offered robust prerequisites for the moderating role of locus of control, however, present research did not provided sufficient empirical support for existence of proposed moderation effect. Current findings also refuted the proposition of Yidong and Xinxin (2013), who suggested potential role of locus of control in the link between ethical leadership and innovative work behavior. A potential reason for the unanticipated findings is that innovative work behavior is essential for successful completion of knowledge-intensive projects and researchers are always required to update and improve the existing products, work processes and procedures for successful completion of such projects. Therefore, irrespective of subordinates' locus of control, ethical leadership exerts its influence on researchers innovative work behavior.

Research Proposition

The predominant proposition of present research was, "ethical leadership is an important contextual factor that encourages employee extra-role behaviors including the voice behavior and innovative work behavior". More specifically, this research was intended to investigate that how and for what kind of employees ethical leadership encourage subordinates voice behavior and innovative work behavior. The results revealed that main proposition of this research received full support as ethical leadership was found to relate positively and significantly with both of the followers voice behavior and innovative work behavior. In view of the mediating mechanisms, to investigate how ethical leadership influence both voice behavior and innovative work behavior, psychological empowerment and leader-member exchange were considered as the potential mediators. Current research demonstrated that ethical leadership influence voice behavior and innovative work behavior via enhancing followers' perceived psychological empowerment. However, it was found that leader-member exchange only mediates the association between ethical leadership and voice behavior. Lastly, to investigate that for what kind of employees' ethical leadership is effective promoting voice behavior and innovative work behavior, individual factors including employee job performance and locus of control were proposed as moderators respectively. Study results shown that voice behavior is influenced by ethical leadership strongly and significantly only in case of poor performers. Whereas, ethical leadership encourages followers to engage in innovative work behavior irrespective of employee locus of control. Thus, the proposed moderating roles of individual related factors received partial support.

Contributions of the Research Study

This study contributed to the existent literature in number of ways. Contributions of present research can be categorized as theoretical, empirical and practical.

Theoretical Contributions

- This research study provided a detailed literature review on ethical leadership, voice behavior, innovative work behavior, psychological empowerment, leader-member exchange, job performance and locus of control.
- Based on the literature reviewed, present research proposed a comprehensive research framework to fill the literary gaps.
- This research contributed to the leadership literature via exclusively focusing on ethical leadership and demonstrating its role in determining followers' extra-role behaviors at workplace.
- Present research substantiated literature via analyzing voice behavior and innovative work behavior in the framework of ethical leadership. The results that ethical leadership can encourage subordinates voice behavior and innovative work behavior provided abundant authentication to the fact that leadership ethics play a significant role in determining employee engagement in extra-role efforts.
- This research also extended literature on the psychological processes via which ethical leadership can influence employee voice behavior and innovative work behavior. More specifically, this research is a primary attempt for endorsing mediating role of psychological empowerment, as results showed that ethical leadership can encourage voice behavior and innovative work behavior of employees via enhancing their psychological empowerment.

- Added literature by primarily investigating mediating role of leader-member exchange in the relationship of ethical leadership and extra-role behaviors (voice behavior and innovative work behavior).
- Another important contribution of this research is the investigation of moderating role of job performance. None of the previous studies examined the moderating role of job performance in ethical leadership-voice behavior relationship.
- This research also examined moderating role of locus of control in ethical leadership-innovative work behavior relationship that was not examined earlier.
- This research also contributed to the existing literature via confirming the applicability of social learning theory (Bandura, 1977) and social exchange theory (Blau, 1964) as the primary mechanisms by which ethical leadership encourages extra-role behaviors of subordinates.

Empirical Contributions

- Substantiated the validity, confirmed the factor structure and tested the reliability of predeveloped scales (used for measuring ethical leadership, voice behavior, innovative work behavior, psychological empowerment, leader-member exchange, job performance and locus of control) in the local organizational context of Pakistan.
- Tested the demographic differences on "perceived ethical leadership, voice behavior, innovative work behavior, psychological empowerment, leader-member exchange, job performance and locus of control" for the employees involved in knowledge-intensive projects of government sector research organizations.

- Tested the mediating role of psychological empowerment and leader-member exchange in the relationship of ethical leadership and employees extra-role behaviors (voice behavior and innovative work behavior).
- Tested moderating role of job performance in ethical leadership and voice behavior relationship.
- Tested moderating role of locus of control in the link between ethical leadership and innovative work behavior.

Practical Contributions

- Most of the previous studies on ethical leadership, voice behavior and innovative work behavior were conducted using samples from private organizations. Whereas, in the present research the proposed hypotheses were tested via analyzing data obtained from government organizations. Therefore, study findings are noteworthy as there are limited empirical investigations on study variables in the context of public sector organizations.
- This research also contributes to the existent literature as there are limited studies, focused on ethical leadership, voice behavior and innovative work behavior, which are conducted in developing societies like Pakistan.
- Finally, utilizing a sample of researchers working in ten government research organizations this research provided an insight into management of knowledgeable workforce. Growing importance of individual's innovative work behavior and voice behavior for effective functioning and survival of organizations has increased significance of knowledgeable employees around the world. Thus, investigating factors that encourage such desired behavior in

knowledge-intensive organizations is crucial. Present research, thus, enriched literature by highlighting role of ethical leadership in encouraging voice behavior and innovative work behavior of researchers in an under studied context.

Implications of Research Study

This research study has several implications for academicians and practice. First, results of this research may assist scholars focusing on employee related outcomes of ethical leadership. Second, focusing on individual-related mediators and moderators, this study may help future scholars for understanding how and for what kind of employees ethical leadership encourage voice behavior and innovative work behavior.

Third, study results showed that when employees observe their leader's ethical behavior, they become more inclined to engage themselves in voice and innovative work behaviors. Therefore, it is suggested that leaders should become role models via articulating their practices as moral persons and moral managers.

Fourth, present research has implications for organizational policy makers as they should design policies to develop, evaluate and reward ethical behaviors on the part of leaders. For this purpose, development of selection tools for assessing ethicality of leaders is required at first place. Human resource (HR) divisions need to be careful while selecting and assigning leadership positions, as management may consider application of certain integrity tests during selection process. These selection procedures must include assessment of previous workplace actions and decisions in ethical context. After choosing individuals with ethical potential for leadership positions, necessary training should be provided to reinforce ethical skills required for moral actions and decisions. Moreover, required ethical leadership protocols should be added into organization's HR practices for

supervisors' assessments and rewards. Such initiatives will assist leaders to understand subordinates' perspective. Moreover, these organizational level efforts are also expected to induce overall ethical culture that will embed trickle-down effects across organizational hierarchies (Schaubroeck et al., 2012), making individual employees to recognize organizational policies for courageous extra-role efforts that will encourage them to express favorable behaviors (such as voice and innovative work behaviors) for overall organizational improvements.

Fifth, as suggested by the research findings, ethical behavior of a leader paly significant role in determining subordinates voice and innovative work behaviors. While investigated in research organizations, current findings could have more significant implications for knowledge-intensive organizations. For instance, constructive voice and innovative behavior might be vital for knowledge-intensive research projects to be successful, given that individuals voicing of their minds, innovating new procedures and improving existing protocols is essential for long-term organizational survival.

Six, via demonstrating psychological empowerment as a significant mediator, present research identified a proximal antecedent of voice behavior and innovative work behavior which can be enhanced by providing training for ethical leadership practices. Therefore, while designing training programs for organizational leaders; primary efforts should be assigned to the ways for enhancing subordinates' perceived empowerment. As a result, more equipped leaders will be able to inculcate a 'can do' perspective among followers for extra-role efforts.

Seven, via identifying ethical leadership as an important predictor of leader-member exchange and supporting its mediating role in ethical leadership and voice

behavior relationship, current findings suggested that managers and leaders are required to focus on the nature of relationship they have with subordinates to encourage followers voice behavior.

Finally, by showing job performance as moderator, results suggested that organizations should detect individual differences and promote ethical leadership to facilitate voice behavior of employees facing performance issues at workplace.

Limitations of the Study

There are some limitations of present research that are needed to be considered while interpreting study findings. First, use of cross-sectional research design indicated that causal inferences of current research may not be conclusive. As, it is also possible that, subordinate's active voice expression leads toward higher level of leader-member exchange, opposing the causal order suggested by research results. Nevertheless, it is notable that findings of present research are in line with theoretical propositions based on existing literature. Second, study constructs were tested in a cross-sectional quantitative survey research that is not ideal as some other confounds may influence results. Thus, mixed method or multi method studies with qualitative portion as well may validate and supplement the survey data. Third, data for study variables was collected from the same source using similar data collection methods (i.e., all survey and all perceptions) that may raise concerns about common method bias. Although, in current study Harman's one factor test indicated that there was no serious issue of common method bias. Fourth, as the data used in present research was collected from government research organizations in Pakistan, generalizability of research findings for other organizational and cultural contexts are likely to be interrogated. For instance, mediating role of leader-member

exchange in ethical leadership-voice behavior relationship might be stronger in Pakistan due to high power distance and collectivist culture. As in such cultures followers are intended to reciprocate favorable treatment from their leader in the form of extra-role efforts compared to low power-distance and individualistic cultures where there are least expectations of such reciprocations (Westwood et al., 2004; Newman et al., 2017). Thus, results of present study should be interpreted with caution for other cultural contexts. Fifth, present research suggested significant influence of ethical leadership on subordinates' voice behavior and innovative work behavior. However, the research findings may not provide with the unique variance being explained by ethical leadership as other related forms of leadership (e.g., transformational and authentic) were not controlled. Lastly, as present research only considered two mediators and two moderators, there could be additional mediating and/or moderating mechanisms explaining the proposed relationships that are needed to be examined.

Further Areas for Research

Limitations of this study indicated further areas for future researches. First, for more conclusive causal inferences and to eliminate common method bias to its minimal possible level, future studies should benefit from (a) using longitudinal research designs; (b) using different measurement methods (e.g., objective measures of job performance including contribution for revenue growth or sales); and, (c) collecting data from different sources (i.e., can consider peers and/or supervisors for observer ratings). Second, future researches may examine the proposed relationships in other cultural and organizational contexts to increase generalizability of current findings. Third, as in this study other forms of leadership were not controlled, future studies via controlling for

other related leadership styles may examine unique variance being explained by ethical leadership.

Fourth, considering employee voice behavior and innovative work behavior as important extra-role efforts of employees', current study focused on the role of ethical leadership, psychological empowerment, leader-member exchange, job performance and locus of control. Future researches may examine the effects of other related leadership styles (e.g., authentic leadership, servant leadership) considering the similar moderating and mediating variables or can explore more distinct mediators and/or moderators (including but not limited to psychological safety, organizational identification, duty orientation, personality and perceived task significance) for investigating employee voice and innovative work behaviors at workplace. Additionally using the same token, future researches can offer supplementary evidences for (a) mediating role of psychological empowerment and leader-member exchange; and, (b) moderating role of job performance and locus of control in the relationship between ethical leadership and employee extra-role behaviors other than voice and innovative work behaviors (e.g., organizational citizenship behavior and extra-role performance).

Lastly, present research was unsuccessful to confirm the moderating role of locus of control in the link between ethical leadership and innovative work behavior. Therefore, future studies have to ascertain other moderators that may weaken or strengthen the effect of ethical leadership on innovative work behavior of subordinates.

Conclusion

The aim of present research was to examine the influence of ethical leadership on employee extra-role behaviors (voice behavior and innovative work behavior) in

government research organizations of Pakistan. Study results revealed that ethical leadership have significant positive effects on voice behavior and innovative work behavior. It was also found that psychological empowerment mediate the link between ethical leadership and the outcomes. Results revealed that leader-member exchange only mediated the link between ethical leadership and voice behavior. Job performance was found to moderate ethical leadership-voice behavior relationship. However, mediating role of leader-member exchange and moderating role of locus of control in the link of ethical leadership and innovative work behavior was not supported.

Study results confirmed that ethical leadership encourages followers to engage in voice behavior and innovative work behavior. The positive association between ethical leadership and voice behavior may attribute to distinguished characteristics of ethical leaders which provide followers with the cues regarding safety and effectiveness of voice. Moreover, as ethical leaders publically support appropriate work practices and criticize inappropriate behaviors, this also encourage subordinates to understand that voice behavior is valued and welcomed by their leader. Thus, following their role models at workplace, employees become sensitive to workplace issues and ultimately get engaged in voice behavior for constructive changes. There are numerous causes of positive linkage between ethical leadership and innovative work behavior as well. More specifically, ethical leaders via (a) facilitating employees to obtain work related knowledge and expertise make them capable to generate new ideas; (b) emphasizing open communication facilitate idea promotion; and, (c) providing employees with freedom, autonomy and control over job tasks help idea implementation. In this way, ethical leadership encourages followers to get engaged in innovative work behavior.

As shown by the study results ethical leadership positively relates to followers psychological empowerment and leader-member exchange. Thus, via improving followers empowerment and exchange perceptions ethical leadership encourage follower voice behavior. Moreover, it was also found that via enhancing psychological empowerment of followers, ethical leadership also contribute toward innovative work behavior. However, study results indicated that leader-member exchange does not mediate the link between ethical leadership and innovative work behavior. These results may attribute to the characteristics of the study sample, as researchers are the individuals who are usually engaged in knowledge-intensive projects which necessitate continuous improvements and innovation on the part of employees. Therefore, employee personal capabilities, job knowledge and work involvement may play more significant role than the quality of relational exchange with the immediate supervisor. Thus, ethical leaders can influence innovative work behavior of employees via improving their perceived psychological empowerment but not leader-member exchange.

Research proposition that job performance of employees moderate the link between ethical leadership and voice behavior was supported. As, individuals who are facing performance issues need more help and motivation from their leader and are likely to perceive themselves safe when being managed by an ethical supervisor. Hence, ethical leadership is more significant for encouraging voice behavior of poor performers.

Study results suggested that locus of control do not moderate the relationship among ethical leadership and innovative work behavior. A potential reason for the study findings is that innovative work behavior is essential for successful completion of knowledge-intensive projects. Thus, in the perspective of research organizations, ethical

leadership exerts its influence on employee innovative work behavior irrespective of subordinate's locus of control.

To conclude, present research fulfilled the main objectives of exploring how and for what kind of employees ethical leadership encourage voice behavior and innovative work behavior. It rendered a new insight into the processes via which ethical leadership influence extra-role behaviors of followers. Moreover, results suggested that ethical leadership encourage voice behavior of employees, especially for poor performers. It is anticipated that this research will help scholars and practitioners focusing on ethical leadership as an antecedent to employee voice behavior and innovative work behavior.

References

Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Newbury Park: Sage.

Amabile, T. M. (1996). *Creativity and innovation in organizations*. HBS No. 396-239. Boston, MA: Harvard Business School.

Amabile, T. M., Conti, R., Coon, H., Lazenby, J., & Herron, M. (1996). Assessing the work environment for creativity. *Academy of Management Journal*, *39*(5), 1154-1184.

Ashford, S. J., Sutcliffe, K. M., & Christianson, M. K. (2009). Speaking up and speaking out: The leadership dynamics of voice in organizations. In J. Greenberg, & M. S. Edwards (Eds.), *Voice and silence in organizations* (pp. 175-202). Bingley: Emerald Group Publishing Limited.

Ashforth, B. E. (1989). The experience of powerlessness in organizations. *Organizational Behavior and Human Decision Processes*, *43*(2), 207-242.

Atwater, L., & Carmeli, A. (2009). Leader–member exchange, feelings of energy, and involvement in creative work. *The Leadership Quarterly*, *20*(3), 264-275.

Aube, C., Rousseau, V., & Morin, E. M. (2007). Perceived organizational support and organizational commitment: The moderating effect of locus of control and work autonomy. *Journal of Managerial Psychology*, *22*(5), 479-495.

Avey, J. B., Palanski, M. E., & Walumbwa, F. O. (2011). When leadership goes unnoticed: The moderating role of follower self-esteem on the relationship between ethical leadership and follower behavior. *Journal of Business Ethics, 98*(4), 573–582.

Avey, J. B., Wernsing, T. S., & Palanski, M. E. (2012). Exploring the process of ethical leadership: The mediating role of employee voice and psychological ownership. *Journal of Business Ethics*, *107*(1), 21-34.

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*(8), 951-968.

Babbie, E. (2007). *The practice of social research*. Belmont, CA: Thomson Wadsworth Learning.

Bai, Y., Lin, L., & Liu, J. T. (2017, March). Leveraging the employee voice: A multi-level social learning perspective of ethical leadership. *The International Journal of Human Resource Management*, 1-33.

Bandura, A. (1977). *Social learning theory*. Englewood Cliffs, NJ: Prentice-Hall.

Bandura, A. (1986). *Social foundations of thought and action: A social-cognitive theory*. Englewood Cliffs, NJ: Prentice-Hall.

Barling, J., Christie, A., & Hoption. C. (2010). Leadership. In S. Zedeck (Ed.), *APA handbook of industrial and organizational psychology* (pp. 183–240). Washington, DC, US: American Psychological Association.

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.

Basu, R., & Green, S. G. (1997). Leader-member exchange and transformational leadership: An empirical examination of innovative behaviors in leader-member dyads. *Journal of Applied Social Psychology*, *27*(6), 477-499.

Bentler, P. M., & Bonett, D. G. (1980). Significance tests and goodness of fit in the analysis of covariance structures. *Psychological Bulletin*, *88*(3), 588-606.

Blau, P. M. (1964). *Exchange and power in social life.* New York: Wiley.

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). New York: Jossey-Bass.

Borman, W. C., & Motowidlo, S. J. (1997). Task performance and contextual performance: The meaning for personnel selection research. *Human Performance*, *10*(2), 99–109.

Botero, I. C., & Van Dyne, L. (2009). Employee voice behavior: Interactive effects of LMX and power distance in the United States and Colombia. *Management Communication Quarterly*, *23*(1), 84-104.

Brockner, J. (1988). *Issues in organization and management series. Self-esteem at work: Research, theory, and practice.* Lexington, MA, England: Lexington Books/D. C. Heath and Com.

Brown, M. E., & Mitchell, M. S. (2010). Ethical and unethical leadership: Exploring new avenues for future research. *Business Ethics Quarterly*, *20*(4), 583-616.

Brown, M. E., & Trevino, L. K. (2006). Ethical leadership: A review and future directions. *The Leadership Quarterly*, *17*(6), 595-616.

Brown, M. E., Trevino, L. K., & Harrison, D. A. (2005). Ethical leadership: A social learning perspective for construct development and testing. *Organizational Behavior and Human Decision Processes*, *97*(2), 117-134.

Browne, M. W., & Cudeck, R. (1992). Alternative ways of assessing model fit. *Sociological Methods & Research*, *21*(2), 230-258.

Burke, W. W. (1986). Leadership as empowering others. In S. Srivastva and Associates (Eds.), *Executive power* (pp. 51-77). San Francisco: Jossey-Bass.

Burris, E. R., Detert, J. R., & Chiaburu, D. S. (2008). Quitting before leaving: The mediating effects of psychological attachment and detachment on voice. *Journal of Applied Psychology*, *93(4)*, 912–922.

Campbell, J. P. (1990). Modeling the performance prediction problem in industrial and organizational psychology. In M. Dunnette, & L. M. Hough (Eds.), *Handbook of industrial and organizational psychology* (2nd ed., Vol. 1, pp. 687-731). Palo Alto, CA: Consulting Psychologists Press.

Campbell, J. P., McCloy, R. A., Oppler, S. H., & Sager, C. E. (1993). A theory of performance. In N. Schmitt, & W. C. Borman (Eds.), *Personnel selection in organizations* (pp. 35-70). San Francisco: Jossey-Bass.

Chen, A. S. Y., & Hou, Y. H. (2016). The effects of ethical leadership, voice behavior and climates for innovation on creativity: A moderated mediation examination. *The Leadership Quarterly*, *27*(1), 1-13.

Chughtai, A. A. (2016). Can ethical leaders enhance their followers' creativity?. *Leadership*, *12*(2), 230-249.

Ciulla, J. B. (2004). *Ethics, the heart of leadership*. Santa Barbara, CA: Praeger Publishers.

Conger, J. A., & Kanungo, R. N. (1988). The empowerment process: Integrating theory and practice. *Academy of Management Review*, *13*(3), 471-482.

Coyle-Shapiro, J. A. M., & Conway, N. (2004). The employment relationship through the lens of social exchange. In J. A. M. Coyle-Shapiro, L. M. Shore, S. M. Taylor, & L. Tetrick (Eds.), *The employment relationship: Examining psychological and contextual perspectives* (pp. 5–28). Oxford, UK: Oxford University Press.

Cropanzano, R., & Mitchell, M. S. (2005). Social exchange theory: An interdisciplinary review. *Journal of Management*, *31*(6), 874-900.

Cumbo, L. J. (2009). Ethical leadership: The quest for character, civility, and community. *Current Reviews for Academic Libraries*, *47*(4), 726-726.

De Hoogh, A. H., & Den Hartog, D. N. (2008). Ethical and despotic leadership, relationships with leader's social responsibility, top management team effectiveness and subordinates' optimism: A multi-method study. *The Leadership Quarterly*, *19*(3), 297-311.

De Jong, J. P. J., & Den Hartog, D. N. (2008). *Innovative work behavior: Measurement and validation* (EIM Research Report No. H200820). The Netherlands: Scientific Analysis of Entrepreneurship and SMEs. Retrieved from http://ondernemerschap.panteia.nl/pdf-ez/h200820.pdf

Deci, E. L., Connell, J. P., & Ryan, R. M. (1989). Self-determination in a work organization. *Journal of Applied Psychology*, *74*(4), 580-590.

Deluga, R. J. (1994). Supervisor trust building, leader-member exchange and organizational citizenship behaviour. *Journal of Occupational and Organizational Psychology*, *67*(4), 315-326.

Detert, J. R., & Burris, E. R. (2007). Leadership behavior and employee voice: Is the door really open?. *Academy of Management Journal*, *50*(4), 869-884.

Dhar, R. L. (2016). Ethical leadership and its impact on service innovative behavior: The role of LMX and job autonomy. *Tourism Management*, *57*, 139-148.

Dienesch, R. M., & Liden, R. C. (1986). Leader-member exchange model of leadership: A critique and further development. *Academy of Management Review*, *11*(3), 618-634.

Dillman, D. A. (2007). *Mail and internet surveys: The tailored design method*. New Jersey: Wiley & Sons, Inc.

Dulebohn, J. H., Bommer, W. H., Liden, R. C., Brouer, R. L., & Ferris, G. R. (2012). A meta-analysis of antecedents and consequences of leader-member exchange: Integrating the past with an eye toward the future. *Journal of Management*, *38*(6), 1715-1759.

Edwards, J. R., & Lambert, L. S. (2007). Methods for integrating moderation and mediation: A general analytical framework using moderated path analysis. *Psychological Methods*, *12*(1), 1-22.

Elias, S. M. (2009). Restrictive versus promotive control and employee work outcomes: The moderating role of locus of control. *Journal of Management*, *35*(2), 369-392.

Erdogan, B., Liden, R. C., & Kraimer, M. L. (2006). Justice and leader-member exchange: The moderating role of organizational culture. *Academy of Management Journal*, *49*(2), 395-406.

Esch, E. V., Wei, L. Q., & Chiang, F. F. T. (2016). High-performance human resource practices and firm performance: The mediating role of employees' competencies and the moderating role of climate for creativity. *The International Journal of Human Resource Management*, 1-26.

Fabrigar, L. R., Wegener, D. T., MacCallum, R. C., & Strahan, E. J. (1999). Evaluating the use of exploratory factor analysis in psychological research. *Psychological Methods*, *4*(3), 272-299.

Fairchild, A. J., & MacKinnon, D. P. (2009). A general model for testing mediation and moderation effects. *Prevention Science, 10*(2), 87-99.

Ferrell, O. C., Fraedrich, J., & Ferrell, L. (2015). *Business ethics: Ethical decision making & cases.* Canada: Nelson Education.

Field, A. (2009). *Discovering statistics using SPSS: (and sex and drugs and rock 'n' roll)* (3rd ed.). Thousand Oaks, CA: Sage publications Inc.

Fowler, F. J. (2002). *Survey research methods*. Thousand Oaks, CA: Sage Publications Inc.

Frank, D. G. (2002). Meeting the ethical challenges of leadership. *Journal of Academic Librarianship*, *28*(1/2), 81.

Freeman, R. E., & Stewart, L. (2006). *Developing ethical leadership*. Virginia, USA: Business Roundtable Institute for Corporate Ethics. Bridge papers http://www.corporate-ethics.org/pdf/ethical_leadership.pdf

Gardner, W. L., Avolio, B. J., Luthans, F., May, D. R., & Walumbwa, F. (2005). "Can you see the real me?" A self-based model of authentic leader and follower development. *The Leadership Quarterly*, *16*(3), 343-372.

Gist, M. E. (1987). Self-efficacy: Implications for organizational behavior and human resource management. *Academy of Management Review, 12*(3), 472-485.

Gkorezis, P., Georgiou, L., & Theodorou, M. (2016). High-performance work practices and nurses' intention to leave: The mediating role of organizational cynicism and the moderating role of human resource management-related educational background. *The International Journal of Human Resource Management*, 1-20.

Gorden, W. I. (1988). Range of employee voice. *Employee Responsibilities and Rights Journal*, *1*(4), 283-299.

Graen, G. B., & Scandura, T. A. (1987). Toward a psychology of dyadic organizing. *Research in Organizational Behavior*, *9*, 175–208.

Graen, G. B., & Uhl-Bien, M. (1995). Relationship-based approach to leadership: Development of leader-member exchange (LMX) theory of leadership over 25 years: Applying a multi-level multi-domain perspective. *The Leadership Quarterly*, *6*(2), 219-247.

Greenleaf, R. K. (1977/2002). Essentials of servant leadership. In L. C. Spears, & M. Lawrence (Eds.), *Focus on leadership: Servant-leadership for the twenty-first century* (pp. 19-25). New York: John Wiley & Sons.

Hair, J. F., Anderson, R. E., Tatham, R. L., & Black, W. C. (1992). *Multivariate data analysis* (3rd ed.). New York: Macmillan.

Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (1998). *Multivariate data analysis* (Vol. 5, No. 3, pp. 207-219). Upper Saddle River, NJ: Prentice hall.

Harman, H. H. (1960). *Modern factor analysis*. Chicago, IL: The University of Chicago Press.

Hassan, S. (2015). The importance of ethical leadership and personal control in promoting improvement-centered voice among government employees. *Journal of Public Administration Research and Theory*, *25*(3), 697-719.

Hattrup, K., O'Connell, M. S., & Wingate, P. H. (1998). Prediction of multidimensional criteria: Distinguishing task and contextual performance. *Human Performance*, *11*(4), 305–319.

Hayes, A. F. (2012). PROCESS: A versatile computational tool for observed variable mediation, moderation, and conditional process modeling [White paper]. Retrieved from https://is.muni.cz/el/1423/podzim2014/PSY704/50497615/hayes_2012_navod_process.pdf

Hayes, A. F. (2013). *Introduction to mediation, moderation, and conditional process analysis. A regression-based approach*. New York, NY: Guilford Press.

Hayes, A. F., & Matthes, J. (2009). Computational procedures for probing interactions in OLS and logistic regression: SPSS and SAS implementations. *Behavior Research Methods*, *41*(3), 924-936.

Hayes, A. F., Preacher, K. J., & Myers, T. A. (2011). Mediation and the estimation of indirect effects in political communication research. In E. P. Bucy, & R. Lance Holbert (Eds.), *Sourcebook for political communication research: Methods, measures, and analytical techniques* (pp. 434-465). New York: Routledge.

Heifetz, R. A. (2006). Anchoring leadership in the work of adaptive progress. In F. Hesselbein, & M. Goldsmith (Eds.), *The leader of the future 2: Visions, strategies, and practices for the new era* (pp. 73-84). San Francisco, CA: Jossey-Bass.

Hersey, P., & Blanchard, K. (1982). *Management of organizational behavior* (4th ed.). Englewood Cliffs, NJ: Prentice-Hall.

Hirschman, A. O. (1970). *Exit, voice, and loyalty: Responses to decline in firms, organizations, and states*. Cambridge, MA: Harvard University Press.

Hsiung, H. H. (2012). Authentic leadership and employee voice behavior: A multi-level psychological process. *Journal of Business Ethics*, *107*(3), 349-361.

Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, *6*(1), 1-55.

Hu, X., & Jiang, Z. (2016, November). Employee-oriented HRM and voice behavior: A moderated mediation model of moral identity and trust in management. *The International Journal of Human Resource Management*, 1-26.

Hutman, E. (1999). *The relationship between self-esteem and job performance* (Master's thesis). Retrieved from ProQuest Dissertations and Theses database. (UMI No. 1394458)

Ireland, R. D., & Hitt, M. A. (2005). Achieving and maintaining strategic competitiveness in the 21st century: The role of strategic leadership. *Academy of Management Executive*, *19*(4), 63-77.

Janssen, O. (2000). Job demands, perceptions of effort-reward fairness and innovative work behaviour. *Journal of Occupational and Organizational Psychology*, *73*(3), 287-302.

Janssen, O. (2005). The joint impact of perceived influence and supervisor supportiveness on employee innovative behaviour. *Journal of Occupational and Organizational Psychology*, *78*(4), 573-579.

Javed, B., Khan, A. A., Bashir, S., & Arjoon, S. (2017). Impact of ethical leadership on creativity: The role of psychological empowerment. *Current Issues in Tourism*, *20*(8), 839-851.

Jiang, Z., Le, H., & Gollan, P. J. (2017, May). Cultural intelligence and voice behavior among migrant workers: The mediating role of leader–member exchange. *The International Journal of Human Resource Management*, 1-31.

Johnson, S. J., Batey, M., & Holdsworth, L. (2009). Personality and health: The mediating role of trait emotional intelligence and work locus of control. *Personality and Individual Differences*, *47*(5), 470-475.

Jung, Y. (2014). *Employee voice and recipients' appraisals/reactions: The effects of speech style, voice type, and voicer status* (Doctoral dissertation). Retrieved from http://ir.lib.uwo.ca/etd/2141

Kalshoven, K., Den Hartog, D. N., & De Hoogh, A. H. (2011). Ethical leadership at work questionnaire (ELW): Development and validation of a multidimensional measure. *The Leadership Quarterly*, *22*(1), 51-69.

Kanter, R. M. (1988). When a thousand flowers bloom: Structural, collective, and social conditions for innovation in organizations. In B. M. Staw, & L. L. Cummings (Eds.), *Research in organizational behavior* (Vol. 10, pp. 169-211). Greenwich, CT: JAI Press.

Kanungo, R. N., & Mendonca, M. (1996). *Ethical dimensions of leadership.* Thousand Oaks, CA: Sage.

Kaptein, M. (2003). The diamond of managerial integrity. *European Management Journal*, *21*(1), 99-108.

Kerlinger, F. N. (1986). *Foundations of behavioral research*. New York: Holt, Rinehart and Winston.

Konrad, A. M., & Linnehan, F. (1995). Formalized HRM structures: Coordinating equal employment opportunity or concealing organizational practices?. *Academy of Management Journal*, *38*(3), 787-820.

Kraemer, H. C., Kiernan, M., Essex, M., & Kupfer, D. J. (2008). How and why criteria defining moderators and mediators differ between the Baron & Kenny and MacArthur approaches. *Health Psychology*, *27*(2), 101-108.

Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, *30*(3), 607-610.

Krenl, L. (1992). The moderating effects of locus of control on performance incentives and participation. *Human Relations*, *45*(9), 991-1012.

Landau, J. (2009). To speak or not to speak: Predictors of voice propensity. *Journal of Organizational Culture, Communications and Conflict*, *13*(1), 35-54.

Lasthuizen, K. M. (2008). *Leading to integrity: Empirical research into the effects of leadership on ethics and integrity*. Amsterdam, The Netherlands: VU University.

Lee, D., Choi, Y., Youn, S., & Chun, J. U. (2017). Ethical leadership and employee moral voice: The mediating role of moral efficacy and the moderating role of leader–follower value congruence. *Journal of Business Ethics, 141*(1), 47-57.

LePine, J. A., & Van Dyne, L. (1998). Predicting voice behavior in work groups. *Journal of Applied Psychology*, *83*(6), 853-868.

Liang, J., Farh, C. I. C., & Farh, J. L. (2012). Psychological antecedents of promotive and prohibitive voice: A two-wave examination. *Academy of Management Journal*, *55*(1), 71-92.

Liden, R. C., Sparrowe, R. T., & Wayne, S. J. (1997). Leader-member exchange theory: The past and potential for the future. In G. R. Ferris (Ed.), *Research in personnel and human resources management* (Vol. 15, pp. 47-119). Greenwich, CT: JAI Press.

Liden, R. C., Wayne, S. J., Sparrowe, R. T., & Bradway, L. (1993). *Empowerment and effectiveness study: Feedback report* (Technical Report 1). Urbana-Champaign: University of Illinois.

Liu, W., Zhu, R., & Yang, Y. (2010). I warn you because I like you: Voice behavior, employee identifications, and transformational leadership. *The Leadership Quarterly*, *21*(1), 189-202.

Ma, Y., Cheng, W., Ribbens, B. A., & Zhou, J. (2013). Linking ethical leadership to employee creativity: Knowledge sharing and self-efficacy as mediators. *Social Behavior and Personality*, *41*(9), 1409-1419.

MacCallum, R. C., Browne, M. W., & Sugawara, H. M. (1996). Power analysis and determination of sample size for covariance structure modeling. *Psychological Methods*, *1*(2), 130-149.

Macher, K. (1988). Empowerment and the bureaucracy. *Training and Development Journal*, *42*(9), 41-45.

Mahsud, R., Yukl, G., & Prussia, G. (2010). Leader empathy, ethical leadership, and relations-oriented behaviors as antecedents of leader-member exchange quality. *Journal of Managerial Psychology*, *25*(6), 561-577.

Martins, E. C., & Terblanche, F. (2003). Building organisational culture that stimulates creativity and innovation. *European Journal of Innovation Management*, *6*(1), 64-74.

Masterson, S. S., Lewis, K., Goldman, B. M., & Taylor, M. S. (2000). Integrating justice and social exchange: The differing effects of fair procedures and treatment on work relationships. *Academy of Management Journal*, *43*(4), 738-748.

Mayer, D. M., Kuenzi, M., Greenbaum, R., Bardes, M., & Salvador, R. B. (2009). How low does ethical leadership flow? Test of a trickle-down model. *Organizational Behavior and Human Decision Processes*, *108*(1), 1-13.

Maynes, T. D., & Podsakoff, P. M. (2014). Speaking more broadly: An examination of the nature, antecedents, and consequences of an expanded set of employee voice behaviors. *Journal of Applied Psychology*, *99*(1), 87-112.

McConnell, C. R. (2003). The manager's approach to employee performance problems. *The Health Care Manager*, *22*(1), 63-69.

Mehmood, S. (2016). Impact of ethical leadership on employee creativity: Mediating role of trust and moderating role of creative self efficacy. *Jinnah Business Review*, *4*(2), 65-74.

Morrison, E. W. (2011). Employee voice behavior: Integration and directions for future research. *Academy of Management Annals*, *5*(1), 373-412.

Morrison, E. W., Wheeler-Smith, S. L., & Kamdar, D. (2011). Speaking up in groups: A cross-level study of group voice climate and voice. *Journal of Applied Psychology*, *96*(1), 183-191.

Motowidlo, S. J., & Van Scotter, J. R. (1994). Evidence that task performance should be distinguished from contextual performance. *Journal of Applied Psychology*, *79*(4), 475-480.

Motowidlo, S. J., Borman, W. C., & Schmit, M. J. (1997). A theory of individual differences in task and contextual performance. *Human Performance*, *10*(2), 71–83.

Muhonen, T., & Torkelson, E. (2004). Work locus of control and its relationship to health and job satisfaction from a gender perspective. *Stress and Health*, *20*(1), 21-28.

Muller, D., Judd, C. M., & Yzerbyt, V. Y. (2005). When moderation is mediated and mediation is moderated. *Journal of Personality and Social Psychology*, *89*(6), 852-863.

Mumford, M. D., & Gustafson, S. B. (1988). Creativity syndrome: Integration, application, and innovation. *Psychological Bulletin*, *103*(1), 27-43.

Murphy, K. R. (1989). Dimensions of job performance. In R. F. Dillon, & J. W. Pellegrino (Eds.), *Testing: Theoretical and applied perspectives* (pp. 218-247). New York: Praeger.

Murphy, K. R., & Davidshofer, C. O. (1988). *Psychological testing*. New Jersey: Prentice Hall.

Nahrgang, J. D., Morgeson, F. P., & Ilies, R. (2009). The development of leader–member exchanges: Exploring how personality and performance influence leader and member relationships over time. *Organizational Behavior and Human Decision Processes*, *108*(2), 256-266.

Neely, A., & Hii, J. (1998). *Innovation and business performance: A literature review.* Cambridge: The Judge Institute of Management Studies, Retrieved from http://ecsocman.hse.ru/data/696/521/1221/litreview_innov1.pdf

Neilsen, E. H. (1986). Empowerment strategies: Balancing authority and responsibility. In S. Srivastva, & Associates (Eds.), *Executive power* (pp. 78-110). San Francisco: Jossey-Bass.

Neubert, M. J., Carlson, D. S., Kacmar, K. M., Roberts, J. A., & Chonko, L. B. (2009). The virtuous influence of ethical leadership behavior: Evidence from the field. *Journal of Business Ethics*, *90*(2), 157-170.

Newman, A., Schwarz, G., Cooper, B., & Sendjaya, S. (2017). How servant leadership influences organizational citizenship behavior: The roles of LMX, empowerment, and proactive personality. *Journal of Business Ethics*, *145*(1), 49-62.

Nunnally, J. C. (1970). *Introduction to psychological measurement*. New York: McGraw-Hill.

Oke, A., Munshi, N., & Walumbwa, F. O. (2009). The influence of leadership on innovation processes and activities. *Organizational Dynamics*, *38*(1), 64-72.

Palangkaraya, A., Stierwald, A., Webster, E., & Jensen, P. H. (2010). *Examining the characteristics of innovative firms in Australia. A report for the Australian government department of innovation, industry, science and research.* Melbourne: Melbourne Institute of Applied Economic and Social Research.

Paswan, A. (2009). *Confirmatory factor analysis and structural equations modeling: An introduction.* Retrieved from https://www.scribd.com/presentation/100903527/Cfa-sem-Intro-may-18-2009

Pelz, D. C., & Andrews, F. M. (1966). Autonomy, coordination, and stimulation, in relation to scientific achievement. *Systems Research and Behavioral Science*, *11*(2), 89-97.

Piccolo, R. F., Greenbaum, R., Den Hartog, D. N., & Folger, R. (2010). The relationship between ethical leadership and core job characteristics. *Journal of Organizational Behavior*, *31*(2-3), 259-278.

Pierce, J. L., & Gardner, D. G. (2004). Self-esteem within the work and organizational context: A review of the organization-based self-esteem literature. *Journal of Management*, *30*(5), 591-622.

Plinio, A. J. (2009). Ethics and leadership. *International Journal of Disclosure and Governance*, *6*(4), 277-283.

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*(5), 879-903.

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*(3), 879-891.

Preacher, K. J., Rucker, D. D., & Hayes, A. F. (2007). Addressing moderated mediation hypotheses: Theory, methods, and prescriptions. *Multivariate Behavioral Research*, *42*(1), 185-227.

Premeaux, S. F., & Bedeian, A. G. (2003). Breaking the silence: The moderating effects of self-monitoring in predicting speaking up in the workplace. *Journal of Management Studies*, *40*(6), 1537-1562.

Qi, Y., & Ming-Xia, L. (2014). Ethical leadership, organizational identification and employee voice: Examining moderated mediation process in the Chinese insurance industry. *Asia Pacific Business Review*, *20*(2), 231-248.

Qian, J., Wang, B., Han, Z., & Song, B. (2017). Ethical leadership, leader-member exchange and feedback seeking: A double-moderated mediation model of emotional intelligence and work-unit structure. *Frontiers in Psychology*, *8*, 1-11.

Qian, J., Yang, F., Han, Z. R., Wang, H., & Wang, J. (2016). The presence of a feedback-seeking role model in promoting employee feedback seeking: A moderated mediation model. *The International Journal of Human Resource Management*, 1-19.

Raub, S., & Robert, C. (2012). Empowerment, organizational commitment, and voice behavior in the hospitality industry: Evidence from a multinational sample. *Cornell Hospitality Quarterly*, *54*(2), 136–148.

Resick, C. J., Hanges, P. J., Dickson, M. W., & Mitchelson, J. K. (2006). A cross-cultural examination of the endorsement of ethical leadership. *Journal of Business Ethics*, *63*(4), 345-359.

Robbins, S. P. (2000). *Organisational behaviour* (9th ed.). New Delhi: Prentice Hall of India Pvt Ltd.

Roscoe, J. T. (1975). *Fundamental research statistics for the behavioral sciences* (2nd ed.). New York, NY: Holt, Rinehart and Winston.

Rotter, J. B. (1966). Generalized expectancies for internal versus external control of reinforcement. *Psychological Monographs: General and Applied*, *80*(1), 1-28.

Sandel, M. J. (2009). *Justice: What's the right thing to do?*. New York: Farrar, Straus and Giroux.

Sanders, K., Moorkamp, M., Torka, N., Groeneveld, S., & Groeneveld, C. (2010). How to support innovative behaviour? The role of LMX and satisfaction with HR practices. *Technology and Investment*, *1*(1), 59-68.

Saunders, M., Lewis, P., & Thornhill, A. (2009). *Research methods for business* students. Essex, England: Pearson Education Limited.

Scandura, T. A., & Graen, G. B. (1984). Moderating effects of initial leader–member exchange status on the effects of a leadership intervention. *Journal of Applied Psychology*, *69*(3), 428-436.

Scandura, T. A., Graen, G. B., & Novak, M. A. (1986). When managers decide not to decide autocratically: An investigation of leader–member exchange and decision influence. *Journal of Applied Psychology*, *71*(4), 579-584.

Schaubroeck, J. M., Hannah, S. T., Avolio, B. J., Kozlowski, S. W. J., Lord, R. G., Trevino, L. K., Dimotakis, N., & Peng, A. C. (2012). Embedding ethical leadership within and across organization levels. *Academy of Management Journal*, *55*(5), 1053-1078.

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.

Seibert, S. E., Wang, G., & Courtright, S. H. (2011). Antecedents and consequences of psychological and team empowerment in organizations: A meta-analytic review. *Journal of Applied Psychology*, *96*(5), 981-1003.

Sekaran, U. (2003). *Research methods for business: A skill building approach* (4th ed.). New York, NY: John Wiley & Sons, Inc.

Shadfar, S., & Malekmohammadi, I. (2013). Application of structural equation modeling (SEM) in restructuring state intervention strategies toward paddy production development. *International Journal of Academic Research in Business and Social Sciences*, *3*(12), 576-618.

Simonin, B. L. (1997). The importance of collaborative know-how: An empirical test of the learning organization. *Academy of Management Journal*, *40*(5), 1150-1174.

Siu, O. L., Spector, P. E., Cooper, C. L., Lu, L., & Yu, S. (2002). Managerial stress in greater China: The direct and moderator effects of coping strategies and work locus of control. *Applied Psychology*, *51*(4), 608-632.

Sparrowe, R. T., & Liden, R. C. (1997). Process and structure in leader-member exchange. *Academy of Management Review*, *22*(2), 522-552.

Spector, P. E. (1982). Behavior in organizations as a function of employee's locus of control. *Psychological Bulletin, 91*(3), 482-497.

Spector, P. E. (1988). Development of the work locus of control scale. *Journal of Occupational and Organizational Psychology, 61*(4), 335-340.

Spector, P. E., Van Katwyk, P. T., Brannick, M. T., & Chen, P. Y. (1997). When two factors don't reflect two constructs: How item characteristics can produce artifactual factors. *Journal of Management, 23*(5), 659-677.

Spreitzer, G. M. (1995). Psychological empowerment in the workplace: Dimensions, measurement, and validation. *Academy of Management Journal, 38*(5), 1442-1465.

Spreitzer, G. M. (1996). Social structural characteristics of psychological empowerment. *Academy of Management Journal, 39*(2), 483-504.

Sprung, J. M., & Jex, S. M. (2012). Work locus of control as a moderator of the relationship between work stressors and counterproductive work behavior. *International Journal of Stress Management, 19*(4), 272-291.

Stads, G., Niazi, M. A., Gao, L., & Badar, N. (2015). *Pakistan: Agricultural R&D indicators factsheet.* Washington, DC: International Food Policy Research Institute (IFPRI); National Institute of Agricultural Innovation and Technology Transfer.

Steiger, J. H. (1990). Structural model evaluation and modification: An interval estimation approach. *Multivariate Behavioral Research, 25*(2), 173-180.

Stevens, J. (2002). *Applied multivariate statistics for the social sciences* (4th ed.). Hillsdale, NJ: Erlbaum.

Tabachnick, B. G., & Fidell, L. S. (2007). *Using multivariate statistics* (5th ed.). New York: Allyn and Bacon.

Takeuchi, R., Chen, Z., & Cheung, S. Y. (2012). Applying uncertainty management theory to employee voice behavior: An integrative investigation. *Personnel Psychology, 65*(2), 283-323.

Tangirala, S., & Ramanujam, R. (2008). Exploring nonlinearity in employee voice: The effects of personal control and organizational identification. *Academy of Management Journal, 51*(6), 1189-1203.

Thomas, K. W., & Velthouse, B. A. (1990). Cognitive elements of empowerment: An "interpretive" model of intrinsic task motivation. *Academy of Management Review, 15*(4), 666-681.

Toor, S., & Ofori, G. (2009). Ethical leadership: Examining the relationships with full range leadership model, employee outcomes, and organizational culture. *Journal of Business Ethics, 90*, 533–547.

Trevino, L. K., & Brown, M. E. (2004). Managing to be ethical: Debunking five business ethics myths. *Academy of Management Executive, 18*(2), 69-81.

Trevino, L. K., Brown, M., & Hartman, L. P. (2003). A qualitative investigation of perceived executive ethical leadership: Perceptions from inside and outside the executive suite. *Human Relations, 56*(1), 5-37.

Tsui, A. S., Pearce, J. L., Porter, L. W., & Tripoli, A. M. (1997). Alternative approaches to the employee-organization relationship: Does investment in employees pay off?. *Academy of Management Journal, 40*(5), 1089-1121.

Tu, Y., & Lu, X. (2016). Do ethical leaders give followers the confidence to go the extra mile? The moderating role of intrinsic motivation. *Journal of Business Ethics*, *135*(1), 129-144.

Turban, D. B., & Dougherty, T. W. (1994). Role of protégé personality in receipt of mentoring and career success. *Academy of Management Journal, 37*(3), 688-702.

Turnipseed, D. L. (2017). Emotional intelligence and OCB: The moderating role of work locus of control. *The Journal of Social Psychology*, 1-15.

Tushman, M. L., & Nelson, R. R. (1990). Introduction: Technology, organizations, and innovation. *Administrative Science Quarterly*, *35*(1), 1-8.

Uhl-Bien, M., Graen, G. B., & Scandura, T. A. (2000). Implications of leader-member exchange (LMX) for strategic human resource management systems: Relationships as social capital for competitive advantage. *Research in Personnel and Human Resources Management*, *18*, 137-186.

Van de Ven, A. H. (1986). Central problems in the management of innovation. *Management Science*, *32*(5), 590-607.

Van der Vegt, G. S., & Janssen, O. (2003). Joint impact of interdependence and group diversity on innovation. *Journal of Management*, *29*(5), 729-751.

Van Dyne, L., & LePine, J. A. (1998). Helping and voice extra-role behaviors: Evidence of construct and predictive validity. *Academy of Management Journal*, *41*(1), 108-119.

Van Dyne, L., Ang, S., & Botero, I. C. (2003). Conceptualizing employee silence and employee voice as multidimensional constructs. *Journal of Management Studies, 40*(6), 1359-1392.

Van Dyne, L., Cummings, L. L., & Parks, J. M. (1995). Extra-role behaviors: In pursuit of construct and definitional clarity. *Research in Organizational Behavior, 17*, 215–285.

Van Dyne, L., Kamdar, D., & Joireman, J. (2008). In-role perceptions buffer the negative impact of low LMX on helping and enhance the positive impact of high LMX on voice. *Journal of Applied Psychology, 93*(6), 1195-1207.

Viswesvaran, C., & Ones, D. S. (2000). Perspectives on models of job performance. *International Journal of Selection and Assessment, 8*(4), 216-226.

Volmer, J., Spurk, D., & Niessen, C. (2012). Leader–member exchange (LMX), job autonomy, and creative work involvement. *The Leadership Quarterly*, *23*(3), 456-465.

Walumbwa, F. O., & Schaubroeck, J. (2009). Leader personality traits and employee voice behavior: Mediating roles of ethical leadership and work group psychological safety. *Journal of Applied Psychology*, *94*(5), 1275-1286.

Walumbwa, F. O., Mayer, D. M., Wang, P., Wang, H., Workman, K., & Christensen, A. L. (2011). Linking ethical leadership to employee performance: The roles of leader–member exchange, self-efficacy, and organizational identification. *Organizational Behavior and Human Decision Processes*, *115*(2), 204-213.

Walumbwa, F. O., Morrison, E. W., & Christensen, A. L. (2012). Ethical leadership and group in-role performance: The mediating roles of group conscientiousness and group voice. *The Leadership Quarterly*, *23*(5), 953-964.

Walumbwa, F. O., Wang, P., Wang, H., Schaubroeck, J., & Avolio, B. J. (2010). Retracted: Psychological processes linking authentic leadership to follower behaviors. *The Leadership Quarterly*, *21*(5), 901-914.

Wang, D., Gan, C., Wu, C., & Wang, D. (2015). Ethical leadership and employee voice: Employee self-efficacy and self-impact as mediators. *Psychological Reports*, *116*(3), 751-767.

Wayne, S. J., Shore, L. M., Bommer, W. H., & Tetrick, L. E. (2002). The role of fair treatment and rewards in perceptions of organizational support and leader-member exchange. *Journal of Applied Psychology*, *87*(3), 590-598.

Westwood, R., Chan, A., & Linstead, S. (2004). Theorizing Chinese employment relations comparatively: Exchange, reciprocity and the moral economy. *Asia Pacific Journal of Management*, *21*(3), 365-389.

Wheaton, B., Muthen, B., Alwin, D. F., & Summers, G. F. (1977). Assessing reliability and stability in panel models. *Sociological Methodology*, *8*, 84-136.

Woodman, R. W., Sawyer, J. E., & Griffin, R. W. (1993). Toward a theory of organizational creativity. *Academy of Management Review*, *18*(2), 293-321.

Xerri, M. J., & Brunetto, Y. (2013). Fostering innovative behaviour: The importance of employee commitment and organisational citizenship behaviour. *The International Journal of Human Resource Management*, *24*(16), 3163-3177.

Yesil, S., & Sozbilir, F. (2013). An empirical investigation into the impact of personality on individual innovation behaviour in the workplace. *Procedia-Social and Behavioral Sciences*, *81*, 540-551.

Yidong, T., & Xinxin, L. (2013). How ethical leadership influence employees' innovative work behavior: A perspective of intrinsic motivation. *Journal of Business Ethics*, *116*(2), 441-455.

Young, L. D. (2012). How to promote innovative behavior at work? The role of justice and support within organizations. *The Journal of creative behavior*, *46*(3), 220-243.

Yousef, D. A. (2000). The Islamic work ethic as a mediator of the relationship between locus of control, role conflict and role ambiguity–A study in an Islamic country setting. *Journal of Managerial Psychology*, *15*(4), 283-298.

Yuan, F., & Woodman, R. W. (2010). Innovative behavior in the workplace: The role of performance and image outcome expectations. *Academy of Management Journal*, *53*(2), 323-342.

Yukl, G. (2006). *Leadership in organizations*. Englewood Cliffs, NJ: Prentice Hall.

Zhang, X., & Bartol, K. M. (2010). Linking empowering leadership and employee creativity: The influence of psychological empowerment, intrinsic motivation, and creative process engagement. *Academy of Management Journal*, *53*(1), 107-128.

Zheng, W., Yang, B., & McLean, G. N. (2010). Linking organizational culture, structure, strategy, and organizational effectiveness: Mediating role of knowledge management. *Journal of Business Research*, *63*(7), 763-771.

Zhu, W., May, D. R., & Avolio, B. J. (2004). The impact of ethical leadership behavior on employee outcomes: The roles of psychological empowerment and authenticity. *Journal of Leadership & Organizational Studies*, *11*(1), 16-26.

Zikmund, W. G. (2003). *Business research methods*. Mason, Ohio: Thomson South-Western.

Appendix A: Questionnaire

Quaid-i-Azam School of Management Sciences

Quaid-i-Azam University, Islamabad, Pakistan

Dear Sir/Madam,

You are being requested to participate in a study on voice behavior and innovative work behavior. The purpose of this study is to examine the role of ethical leadership in encouraging voice behavior and innovative work behavior of research scientists employed in government research organizations in Pakistan.

You are part of a selected sample of research scientists who are requested to complete the enclosed questionnaire. I know how valuable your time is and I appreciate your efforts in filling out this questionnaire. The completion of the questionnaire should, however, take you no longer than 15 minutes. Your input will provide valuable insights into the understanding of voice behavior and innovative work behavior within the context of government research organizations in Pakistan.

I assure you that your identity and your organization's identity would remain undisclosed; data collected from you will be used only to aggregate the responses and only the aggregate results will be made public.

Please do not put your name on this questionnaire.

Thank you for your help and participation.

Yours sincerely,

Taqveem Tayyasar Zahra

Research Scholar

Quaid-i-Azam School of Management Sciences

Quaid-i-Azam University, Islamabad, Pakistan

Part-I

Instructions

The following questions seek information about you. Please answer these questions by **circling** the appropriate choice.

1. **Your gender:**

   (a) Male (b) Female

2. **Your age group (years):**

   (a) 20-26 (b) 27-33 (c) 34-40 (d) 41-47 (e) 48 or above

3. **Highest degree attained (qualification/education):**

   (a) Bachelor (b) Master (c) M.Phil (d) Ph.D

4. **What are the total number of years that you have been working with this organization (length of service):**

   (a) 5 or less (b) 6-10 (c) 11-15 (d) 16-20 (e) 21 or above

5. **Your employment status:**

   (a) Contractual employee (b) Permanent employee

Part-II

Instructions

Please indicate the extent to which you agree or disagree with each of the following statements by **circling** a number from 1 to 7.

Strongly Disagree	**Disagree**	**Slightly Disagree**	**Neutral**	**Slightly Agree**	**Agree**	**Strongly Agree**
1	2	3	4	5	6	7

1.	I develop and make recommendations concerning issues that affect this organization.	1	2	3	4	5	6	7
2.	I speak up and encourage others in this organization to get involved in issues that affect the organization.	1	2	3	4	5	6	7
3.	I communicate my opinions about work issues to others in this organization even if my opinion is different and others in the organization disagree with me.	1	2	3	4	5	6	7
4.	I keep well informed about issues where my opinion might be useful to this organization.	1	2	3	4	5	6	7
5.	I get involved in issues that affect the quality of work life here in this organization.	1	2	3	4	5	6	7
6.	I speak up in this organization with ideas for new projects or changes in procedures.	1	2	3	4	5	6	7

Part-III

Instructions

Please indicate the extent to which you agree or disagree with each of the following statements by **circling** a number from 1 to 5.

Strongly Disagree	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
1	2	3	4	5

1.	I search out new technologies, processes, techniques, and/or product ideas.	1	2	3	4	5
2.	I generate creative ideas.	1	2	3	4	5
3.	I promote and champion ideas to others.	1	2	3	4	5
4.	I investigate and secure funds needed to implement new ideas.	1	2	3	4	5
5.	I develop adequate plans and schedules for the implementation of new ideas.	1	2	3	4	5
6.	I am innovative.	1	2	3	4	5

Part-IV

Instructions

Please indicate the extent to which you agree or disagree with each of the following statements by **circling** a number from 1 to 7.

Strongly Disagree	**Disagree**	**Slightly Disagree**	**Neutral**	**Slightly Agree**	**Agree**	**Strongly Agree**
1	2	3	4	5	6	7

1.	The work I do is very important to me.	1	2	3	4	5	6	7
2.	My job activities are personally meaningful to me.	1	2	3	4	5	6	7
3.	The work I do is meaningful to me.	1	2	3	4	5	6	7
4.	I am confident about my ability to do my job.	1	2	3	4	5	6	7
5.	I am self-assured about my capabilities to perform my work activities.	1	2	3	4	5	6	7
6.	I have mastered the skills necessary for my job.	1	2	3	4	5	6	7
7.	I have significant autonomy in determining how I do my job.	1	2	3	4	5	6	7
8.	I can decide on my own how to go about doing my work.	1	2	3	4	5	6	7
9.	I have considerable opportunity for independence and freedom in how I do my job.	1	2	3	4	5	6	7
10.	My impact on what happens in my department is large.	1	2	3	4	5	6	7
11.	I have a great deal of control over what happens in my department.	1	2	3	4	5	6	7
12.	I have significant influence over what happens in my department.	1	2	3	4	5	6	7

Part-V

Instructions

Please indicate the extent to which you agree or disagree with each of the following statements by **circling** a number from 1 to 5 on five-point scale ranging from the utmost disagreement to the highest level of agreement with each given statement.

1. Do you know where you stand with your leader……do you usually know how satisfied your leader is with what you do?
   (1) Rarely (2) Occasionally (3) Sometimes (4) Fairly Often (5) Very Often
2. How well does your leader understand your job problems and needs?
   (1) Not a Bit (2) A Little (3) A Fair Amount (4) Quite a Bit (5) A Great Deal
3. How well does your leader recognize your potential?
   (1) Not at All (2) A Little (3) Moderately (4) Mostly (5) Fully
4. Regardless of how much formal authority he/she has built into his/her position, what are the chances that your leader would use his/her power to help you solve problems in your work?
   (1) None (2) Small (3) Moderate (4) High (5) Very High
5. Again, regardless of the amount of formal authority your leader has, what are the chances that he/she would "bail you out," at his/her expense?
   (1) None (2) Small (3) Moderate (4) High (5) Very High
6. I have enough confidence in my leader that I would defend and justify his/her decision if he/she were not present to do so?
   (1) Strongly Disagree (2) Disagree (3) Neutral (4) Agree (5) Strongly Agree
7. How would you characterize your working relationship with your leader?
   (1) Extremely Ineffective (2) Worse Than Average (3) Average (4) Better Than Average (5) Extremely Effective

Part-VI

Instructions

Please indicate the extent to which you agree or disagree with each of the following statements by **circling** a number from 1 to 5.

Strongly Disagree	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
1	2	3	4	5

1.	My "leader/immediate boss" conducts his/her personal life in an ethical manner.	1	2	3	4	5
2.	My "leader/immediate boss" defines success not just by results but also the way that they are obtained.	1	2	3	4	5
3.	My "leader/immediate boss" listens to what employees have to say.	1	2	3	4	5
4.	My "leader/immediate boss" disciplines employees who violate ethical standards.	1	2	3	4	5

5.	My "leader/immediate boss" makes fair and balanced decisions.	1	2	3	4	5		
6.	My "leader/immediate boss" can be trusted.	1	2	3	4	5		
7.	My "leader/immediate boss" discusses work ethics or values with employees.	1	2	3	4	5		
8.	My "leader/immediate boss" sets an example of how to do things the right way in terms of ethics.	1	2	3	4	5		
9.	My "leader/immediate boss" has the best interests of employees in mind.	1	2	3	4	5		
10.	My "leader/immediate boss" when making decisions, asks "what is the right thing to do?"	1	2	3	4	5		

Part-VII

Instructions

Please indicate the extent to which you agree or disagree with each of the following statements by **circling** a number from 1 to 7.

Strongly Disagree	**Disagree**	**Slightly Disagree**	**Neutral**	**Slightly Agree**	**Agree**	**Strongly Agree**
1	2	3	4	5	6	7

1.	My quantity of work is higher than average.	1	2	3	4	5	6	7
2.	My quality of work is much higher than average.	1	2	3	4	5	6	7
3.	My efficiency is much higher than average.	1	2	3	4	5	6	7
4.	My standards of work quality are higher than the formal standards for this job.	1	2	3	4	5	6	7
5.	I strive for higher quality work than required.	1	2	3	4	5	6	7
6.	I uphold highest professional standards.	1	2	3	4	5	6	7

Instructions

Please indicate the extent to which you agree or disagree with each of the following statements (from 7 to 11) by **circling** a number based on options given below from 1 to 7.

(1) Completely Unsatisfactory
(2) Mostly Unsatisfactory
(3) Somewhat Unsatisfactory
(4) Neither Satisfactory nor Unsatisfactory
(5) Somewhat Satisfactory
(6) Mostly Satisfactory
(7) Completely Satisfactory

7.	My ability to perform core job tasks.	1	2	3	4	5	6	7
8.	My judgment when performing core job tasks.	1	2	3	4	5	6	7
9.	My accuracy when performing core job tasks.	1	2	3	4	5	6	7
10.	My job knowledge with reference to core job tasks.	1	2	3	4	5	6	7
11.	My creativity when performing core tasks.	1	2	3	4	5	6	7

Part-VIII

Instructions

The following statements concern your beliefs about jobs in general. They do not refer only to your present job. Please indicate the extent to which you agree or disagree with each of the following statements by **circling** a number from 1 to 6.

Disagree Very Much	**Disagree Moderately**	**Disagree Slightly**	**Agree Slightly**	**Agree Moderately**	**Agree Very Much**
1	2	3	4	5	6

1.	A job is what you make of it.	1	2	3	4	5	6
2.	On most jobs, people can pretty much accomplish whatever they set out to accomplish.	1	2	3	4	5	6
3.	If you know what you want out of a job, you can find a job that gives it to you.	1	2	3	4	5	6
4.	If employees are unhappy with a decision made by their boss, they should do something about it.	1	2	3	4	5	6
5.	Getting the job you want is mostly a matter of luck.	1	2	3	4	5	6
6.	Making money is primarily a matter of good fortune.	1	2	3	4	5	6
7.	Most people are capable of doing their jobs well if they make the effort.	1	2	3	4	5	6
8.	In order to get a really good job, you need to have family members or friends in high places.	1	2	3	4	5	6
9.	Promotions are usually a matter of good fortune.	1	2	3	4	5	6
10.	When it comes to landing a really good job, who you know is more important than what you know.	1	2	3	4	5	6
11.	Promotions are given to employees who perform well on the job.	1	2	3	4	5	6
12.	To make a lot of money you have to know the right people.	1	2	3	4	5	6
13.	It takes a lot of luck to be an outstanding employee on most jobs.	1	2	3	4	5	6
14.	People who perform their jobs well generally get rewarded.	1	2	3	4	5	6
15.	Most employees have more influence on their supervisors than they think they do.	1	2	3	4	5	6
16.	The main difference between people who make a lot of money and people who make a little money is luck.	1	2	3	4	5	6

Thank you for your cooperation and valued time.

Impact of Ethical Leadership on Employee Voice Behavior and Innovative Work Behavior: Role of Psychological Empowerment, Leader-Member Exchange, Job Performance and Locus of Control

by Taqveem Tayyasar Zahra

FILE	PHD_THESIS_TAQVEEM.DOCX (222.18K)		
TIME SUBMITTED	22-MAY-2019 11:32PM (UTC+0500)	WORD COUNT	31031
SUBMISSION ID	1134506032	CHARACTER COUNT	179842

Impact of Ethical Leadership on Employee Voice Behavior and Innovative Work Behavior: Role of Psychological Empowerment, Leader-Member Exchange, Job Performance and Locus of Control

ORIGINALITY REPORT

%15	%4	%8	%13
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	Submitted to Higher Education Commission Pakistan Student Paper	%2
2	Submitted to Grand Canyon University Student Paper	<%1
3	Submitted to ISM Vadybos ir ekonomikos universitetas, UAB Student Paper	<%1
4	Yixin Hu, Liping Zhu, Mengmeng Zhou, Jie Li, Phil Maguire, Haichao Sun, Dawei Wang. "Exploring the Influence of Ethical Leadership on Voice Behavior: How Leader-Member Exchange, Psychological Safety and Psychological Empowerment Influence Employees' Willingness to Speak Out", Frontiers in Psychology, 2018 Publication	<%1