



Original Research Article

Leader-member exchange as moderator of ethical leadership and employees' job performance nexus in Nigeria

Received 23 November, 2022

Revised 9 January, 2023

Accepted 18 January, 2023

Published 11 February, 2023

***¹Osazevbaru Henry Osahon**
¹Amawhe Peter Egwainiovo
and
¹Akpoiyibo Akpobome
Gregory

¹Department of Business
Administration, Faculty of
Management Sciences, Delta State
University, Abraka – Nigeria.

*Corresponding Author
Email: henryosas@yahoo.com,
osazevbaruho@delsu.edu.ng

This study investigated leader-member exchange as moderator of ethical leadership and employees' job performance. Specifically, it examined whether leader-member exchange significantly moderates the relationship between ethical leadership and employees' task, contextual and adaptive performance. The cross-sectional survey research design was utilized for the investigation. The study population comprised 1,842 lower level employees drawn from 18 aluminium manufacturers registered with the Corporate Affairs Commission and Manufacturers Association of Nigeria chapters of four states in the South-South region. The large population warranted the use of Taro Yamane framework to arrive at the sample size of 329 employees. Questionnaire was used to elicit data for the study. The data collected were analyzed using descriptive and inferential statistical tools. A robust analytical framework of structural equation modeling using the partial least square method was used to test the moderating effect of leader-member exchange on the relationship between the independent and dependent variables. The findings indicated that leader-member exchange does not significantly moderate the relationship between ethical leadership (ethical guidance, power sharing, moral perspective and trustworthiness) and employees' job performance (task, contextual, and adaptive).

Keywords: Contextual performance, ethical guidance, moral perspective, adaptive performance, power sharing

JEL Classification: M10, O14, O15

INTRODUCTION

Ethical leadership is a marriage of two major sub-concepts: ethics and leadership (Rich, 2013). Clearly, it is "the process of influencing employees through values, principles, and beliefs that extensively bothers on the accepted norms in organizational behaviours" (Bubble, 2012:3). Several

studies have attempted to draw the relationship between ethical leadership and other workplace variables. One of such variable is the leader-member exchange (LMX). According to Ahmed et al. (2012), there are three different forms of relationships in organizations: organization-

employee, leader-employee, and employer-employee. But one major relationship that has stirred up much interest in organizations is the 'leader-employee relationship'.

LMX defines the relationship between a leader and a subordinate and how they influence each other in the organization (Seejeen, 2017). This relationship can either be in-group (high-quality LMX) or out-group (low-quality LMX). In-group relationship exists where the members are well-trusted and receive better treatment while in out-group relationship; the members are deprived of certain privileges, excluded and feel isolated (Riaz and Zaman, 2018). Also, Karabey and Aliogullari (2018) discussed four dimensions of LMX namely: contribution (which involves the members' perception of the amount, direction and work quality exerted in the relationship), loyalty (the extent to which the leader and member are loyal and support each other), affect (mutual affection exhibited by the leader and member which is not based on professional values), and professional respect (the extent to which the involved parties in the relationship have built a reputation both inside and outside the organization). However, very limited studies have identified a superior's ethical behaviour as an antecedent of LMX quality (Mahsud et al., 2010).

Studies abound that have treated LMX as a moderator and mediator in the relationship between ethical leadership and employees' outcomes (Karabey and Aliogullari, 2018; Monahan, 2021; Ng and Feldman, 2015; Shusha, 2013; Walumbwa et al., 2011) and the outcomes of these studies are mixed. Notwithstanding, there still exist uncultivated areas within ethical leadership and how it influences employees' performance, especially in manufacturing organizations (Monahan, 2021). Consequently, examining the moderating effect of LMX may lead to a greater understanding of the relationship between ethical leadership and employees' job performance.

The concept of LMX has become topical in management literature. However, as it relates to ethical leadership and employees' task performance, studies are relatively scarce. Whilst we acknowledged the lack of empirical studies on ethical leadership dimensions and employees' task performance as moderated by leader-member exchange in developing nations like Nigeria, Shusha (2013) in Egypt and Insan and Masmarulan (2021) in Makassar were able to carry out investigations in the area of employees' task performance. However, a gap still exists in the literature in relation to other dimensions of employees' performance. In order to fill the gap in the literature, this study examined whether leader-member exchange moderates the relationship between ethical leadership dimensions (ethical guidance, power-sharing, moral perspective, and trustworthiness) and employees' performance dimensions (task performance, contextual performance, and adaptive performance) by means of structural equation modeling (SEM).

The manufacturing sector is an indispensable unit of a country's economy. Since the industrial revolution, the art of manufacturing products has witnessed a great change and its innovation permits a nation to become increasingly

more productive in the services rendered. Literature documents that only a few economies have been able to give impetus to their development without investing in the manufacturing industry as a strong and flourishing manufacturing sector usually speed up industrialization.

In Nigeria however, unhealthy work environment and low quality relationship created by unethical leadership have been muted as what could retard growth and development required for industrialization. To this end, this study explored the following: (i) whether LMX significantly moderates the relationship between ethical leadership and employees' task performance. (ii) Whether LMX significantly moderates the relationship between ethical leadership and employees' contextual performance. (iii) The moderating effect of LMX on the relationship between ethical leadership and employees' adaptive performance. This study also hypothesized the following. (i) LMX does not significantly moderate the relationship between ethical leadership dimensions and employees' task performance. (ii) LMX does not significantly moderate the relationship between ethical leadership dimensions and employees' contextual performance. (iii) LMX does not significantly moderate the relationship between ethical leadership dimensions and employees' adaptive performance.

Literature review

Concept of Ethical Leadership

Oates and Dalmau (2013) state that ethical leadership is doing what is right for the long term benefits of all stakeholders. Furthermore, the concept can also be about matching the long and short term goals of an organization in the manner that would accomplish an optimistic outcome both for the organization and all its members (whether leader or subordinate). Ethical leadership can also refer to that type of leadership which is controlled by reverence for moral beliefs and standards and for the dignity and rights of other people. According to Agha, Nwekpa and Eze (2017), ethical leadership relates to concepts such as fairness, transparency, honesty, personality, trust, consideration, integrity, and equal treatment. They affirmed that the issue of ethics in an organization must be addressed from the upper echelon. Examples must be set for the subordinates to follow in order to breed an ethical climate for organizational growth and success.

The definitions of ethical leadership presented above suggest that ethical leaders can set the paradigm for others and resist any enticement to deviate. Bello (2012) states that it is an individual with right value and strong character, who sets examples for others and resists temptations. This set of individuals makes every effort to actualize the goals and mission of an organization without compromising self-interest, and they unite the objectives of the organization with those of its members and external stakeholders. Evidence abounds in literature that ethical leader must recognize the fact that building positive

relations among all members of the organization is paramount as the ingredients for such relationship include the basic principles of trust, compassion, respect, equity, honesty, fairness, and justice. Little wonder, Riaz and Zaman (2018) opined that ethical leadership observable facts comprise of several traits like loyalty, uprightness, sincerity, and caring attitude towards the subordinates.

Concept of Employees' Job Performance

Job performance is defined by Imran and Tanveer (2015) as the set of employee behaviours, results, and outcomes that come after completing the job tasks using certain competencies and that are measured using different metrics. It reflects the employee's behaviours, and from an institutional point of view, it can be productive or counterproductive. Various studies have carved out different constructs which can be used to measure employee job performance at the workplace. Some of these constructs include: contextual job performance (Johnson, 2003); proactive work behaviour, problem-solving, idea implementation, disciplined effort, work outcomes (Schepers, 2011); level of creativity, training efforts, handling work-related stress (Audrey and Patrice, 2012); task performance, contextual performance, adaptive performance, and counterproductive work behaviour (Koopmans et al., 2014).

According to Pradhan and Jena (2017), performance aspects that concern employees can be partitioned into three namely: their task performance, adaptive performance and contextual performance. Task performance refers to the overt behaviours on work tasks displayed by an employee on the job (Koopmans et al., 2014). Adaptive performance reveals an employee's skill to adjust and provides adequate support to their job profile at the workplace; while contextual performance depicts pro-social behaviour shown by employee in a work-setting not necessarily addressed in his/her job role (Pradhan and Jena, 2017). Metrics for assessing an employee's work performance can also include organizational citizenship behaviours, which refers to those behaviours exhibited by an employee which are not formally outlined in his/her job role but helpful to other employees and the organization.

More so, studies such as, Graves et al. (2013) and Iis et al. (2018) have identified eight employee job performance indicators. These are: (i) quantity of work done, which is the amount of work performed by an employee within a specified period of time; (ii) work quality, which is the quality of the outcome of a perfect activity, carrying out an activity with an idea in accordance with the intended purpose; (iii) creativeness, which is the authenticity of the ideas raised by an employee and actions to resolve the emerging issues; (iv) cooperation, which is the willingness of an employee to cooperate with other members of the organization; (v) dependability, that is, awareness, and trustworthiness by an employee in terms of attendance and completion of work; (vi) initiative, which is the spirit of initiative by an employee to carry out new tasks and in

enlarging his/her responsibilities; (vii) job knowledge, which is the breadth of an employee's knowledge about work and skills; and (viii) personal qualities, that is, concerning personality, leadership, hospitality and personal integrity.

Concept of Leader-Member Exchange (LMX)

The work environment of an organization is built on three major types of relationships as observed by Ahmed et al. (2012). These relationships are organization-employee, leader-employee, and employer-employee. One major aspect of these relationships is that which exists between the leader and the employee, also termed as the leader-member relationship or leader-member exchange. LMX can be defined as the quality of the relationship existing between a superior and a subordinate, which has to do with a consideration of the symbiotic rapport, collaborations, and insights about the working relationship (Williams et al., 2016).

Kim et al. (2017) viewed LMX as the dyadic exchange relationship between supervisors and employees within an organizational work unit. This exchange relationship can be wholly divided into two: low-quality and high-quality. As Epitropaki and Martin (2013) had put it, the worth of LMX gives room for a subordinate to know exactly the kind of tactics to employ in influencing a supervisor. And further reiterating this, Martin et al. (2016) argued that there is the propensity to be more indulgent towards subordinates in high-quality LMX. In all, the quality of LMX would depend on how the leaders relate with their followers. A high-quality LMX would ensue in a work environment where there is mutual trust, a high level of motivation, and an auspicious work climate while a low-quality LMX would be a result of poor level of communication between the leaders and the followers (Casimir et al., 2014; Kim et al., 2017).

The quality of LMX between a leader and a subordinate is influenced by several antecedents as stated by Dulebohn et al. (2012). They identified three main groups of antecedents: leader characteristics, follower characteristics, and interpersonal relationships. The leader characteristics include their expectations from followers, their perception of the followers' skills, conditional reward behaviour, extent of leadership traits, extraversion, and level of friendliness. On the other hand, the followers are appraised by their capability, amicability, diligence, locus of control, neuroticism, and level of openness. Dulebohn et al. (2012) further noted that in as much as the leader plays a leading role in establishing a cordial LMX relationship, the follower in turn must occupy a vital part in building such connection. More so, the interpersonal relationship variables that may influence the leader-follower relationship include trust, perceived comparison, fondness, confidence, and self-aggrandizement.

A few scholars have demonstrated the significance of appropriate LMX culture in an organization. Some have suggested that leaders who automatically develop a bond with each of their subordinates would reap its fruits

through responsible decision-making processes, access to resources and enhanced subordinates' performances. Other studies, such as, Sharoni et al. (2015); Rabenu et al. (2019) while commenting on the positive sides of LMX added that it enhances the work engagement of employees through features like vigor, dedication, and absorption. They argued that when employees perceive that the nature of the dyadic relationship existing between them and their superiors is healthy, there is better work design, organizational culture, and improved resource distribution. Thus, it is quite of essence to note also that LMX has been used in literature as an independent variable, a dependent variable, a moderating as well as a mediating variable. LMX has been examined by Karabey and Aliogullari (2018) to include three dimensions namely: contribution, loyalty, and affect. Later, Liden and Maslyn (2018) included professional respect as a dimension.

Empirical Review

Walumbwa et al. (2011) investigated the role of LMX, self-efficacy, and organizational identification in the influence of ethical leadership on employee performance. Data were elicited from 72 supervisors and 201 subordinates of a major pharmaceutical joint-venture in China using a structured questionnaire. The hierarchical linear modeling was used to test the hypotheses. The findings revealed that ethical leadership was positively and significantly related to employee performance; and that this relationship was fully mediated by LMX, self-efficacy, and organizational identification.

Shusha (2013) examined the mediating role of LMX in the relationship between transformational leadership (TFL) and job performance. The measures of TFL were idealized influence, inspirational motivation, individualized consideration, and intellectual stimulation; while job performance was measured based on in-role and extra-role. Data were gathered from a sample of 467 subordinates and their supervisors from 20 small factories in New-Damietta Industrial zone in Egypt. The collected data were analyzed using multiple regression analysis and the results revealed that TFL and LMX had a positive impact on job performance, and that LMX partially mediated the relationship between TFL and job performance.

Niemeyer and Cavazotte (2016) examined ethical leadership, leader-follower relationship and performance in the Telecommunications context. The study specifically focused on analyzing the relationship between ethical leadership and LMX; the association between LMX and job performance; the connection between ethical leadership and employee organizational citizenship behaviour (OCB); and the influence of LMX on employees' goal commitment. Data were elicited using electronic forms sent to the emails of 176 participants comprising 161 employees and 15 managers working as sales representatives in a multinational telecommunications company in Brazil. Statistical tools such as mean, standard deviation, correlation, and multiple regressions were used for

analyzing data. Results indicated that: ethical leadership was positively associated with LMX; LMX was positively related with individual job performance; there exists a significant influence of ethical leadership on an employee's OCB; and that LMX significantly influenced the goal commitment of employees, as the higher the quality of LMX, the higher the commitment.

Karabey and Aliogullari (2018) studied the mediating role of LMX in the impact of ethical leadership on members' creativity and career success. The survey research design was employed whereby copies of structured questionnaire were distributed among 212 employees of Turkish private sector firms. The collected data were analyzed with the help of structural equation modeling, and the findings revealed that ethical leadership affects LMX positively and in turn, LMX has a positive and significant impact on employees' creativity. Also, it was found that ethical leadership has an indirect effect on members' creativity through LMX; while ethical leadership was also found to have a positive and statistically significant direct effect on career success.

Hasib et al. (2020) investigated the effect of transformational leadership (TFL) on employee performance (EP) mediated by LMX. Specifically, the study examined the relationship between TFL and LMX; the relationship between LMX and EP; and whether LMX mediates the influence of TFL on EP. To gather data on the research, questionnaire was administered to 45 permanent employees of Surabaya City Culture and Tourism Office in Indonesia. The partial least square (PLS) approach was used to analyze the retrieved data. The findings indicated the following: TFL has no significant influence on EP; TFL significantly influences LMX; and LMX fully mediates the relationship between TFL and EP.

Guo et al. (2021) looked into how LMX differentiations attenuate the influence of ethical leadership on workplace deviance with employee psychological empowerment (EPE) as mediator. Four hundred and twenty-five (425) employees and forty-three (43) supervisors from various sectors (real estate, education, etc.) were involved in the study and questionnaire was used to elicit data from the respondents. After data analysis using multi-level path, all the formulated hypotheses were sustained. The independent variables and moderating variable were found to significantly influence workplace deviance.

Insan and Masmarulan (2021) studied the effects of LMX and organizational culture on work engagement, and employee performance. The study was conducted in Makassar, South Sulawesi where 93 workers consisting of managers, their assistants, and ordinary employees were sampled from a telecommunication firm. The model used to determine the influence between the variables was a structural model with PLS approach. After data analysis, the findings revealed that LMX had no significant effect on work engagement and on employee performance. It was also discovered that organizational culture had a significant effect on work engagement and on employee performance.

More so, work engagement does not necessarily affect

Table 1. Variable Definition and Measurement

Variables	Measurement
Leader-Member Exchange (LMX)	LMX was measured by adapting the recommended scale designed by Graen and Uhl-Bien (1995). The scale consisted of seven (7) items on a 5-point rating scale of '1' for Strongly Disagree to '5' for Strongly Agree.
Ethical Leadership	In order to match the purpose of the study and its intended respondents, the researcher raised structured statements on the dimensions of ethical leadership adopted in this study. Five (5) statements each were raised on the dimensions: Ethical Guidance and Power Sharing (which were measured by adapting the "Ethical Leadership Scale (ELS)" designed by Kalshoven et al., 2011); Moral Perspective; and Trustworthiness (measured by adapting the "Trust in Leader" Scale developed by Podsakoff et al. (1990), making a total of 20 items under this section. A 5-point Likert scale was used for all items, ranging from '1' for Strongly Disagree to '5' for Strongly Agree.
Job Performance	To evaluate the job performance, the individual work performance scale (IWPS) developed by Koopmans et al. (2011) was adapted. It is a 19-item questionnaire designed to measure three dimensional aspects of employees' job performance at the workplace. They are: task performance, contextual performance and adaptive performance. A 5-point Likert scale was used for all items, ranging from '1' for poor to '5' for excellent.

Source: Authors' Compilation (2022)

Table 2. Reliability Indexes of the Variables

S/N	Variables	Reliability Index
1	Leader-Member Exchange	0.956
2	Ethical Leadership	0.935
3	Employees Job Performance	0.922

Source: Authors' Computation (2022)

employee performance.

RESEARCH METHODS

The cross-sectional survey research design was adopted. The study's population comprised the lower level employees in the eighteen (18) aluminium manufacturing firms registered with Corporate Affairs Commission (CAC) and the Manufacturers Association of Nigeria (M.A.N) Chapters of four states in Nigeria, namely Bayelsa, Delta, Edo, and Rivers as of 31st December, 2021. The population was 1,842 lower level employees. Using the Taro Yamane formula, 329 employees were used as the study's sample. Since the population of each manufacturing company varies, the proportionate sampling procedure was used to determine the sample size for each of the firms. The questionnaire was used as the research instrument to elicit data from the respondents within the sampled aluminium manufacturing firms.

Instrument's Validity and Reliability

The instrument was validated using the face and content validity (Table 1). In order to ensure the instrument's reliability, the Cronbach Alpha test of reliability was used to ascertain the consistency of the instrument's constructs and scale. The Cronbach alpha values obtained for each

variable from the reliability test are presented in Table 2. The results of the reliability test indicates that the instrument is reliable since all the values are greater than 0.70 as suggested by Hair et al. (2011).

Method of Data Analysis

The structural equation modeling (SEM) using the partial least square (PLS) method was used to test the moderating effect of LMX on the relationship between the independent and dependent variables. The alpha level of significance for testing the hypotheses was set at $\alpha < 0.05$. The models estimated in this study are:

Model 1

$$Etp = \beta_0 + \beta_1 Egd + \beta_2 Pws + \beta_3 Mpp + \beta_4 Twn + \beta_5 Lmx + ei$$

Model 2

$$Ecp = \beta_0 + \beta_1 Egd + \beta_2 Pws + \beta_3 Mpp + \beta_4 Twn + \beta_5 Lmx + ei$$

Model 3

$$Eap = \beta_0 + \beta_1 Egd + \beta_2 Pws + \beta_3 Mpp + \beta_4 Twn + \beta_5 Lmx + ei$$

Where: Etp= Employee task performance,

Ecp=Employee contextual performance

Eap = Employee adaptive performance,

Egd = Ethical guidance

Pws = Power sharing,

Mpp = Moral perspective

Twn = Trustworthiness,

Lmx = Leader-member exchange

e = error term

Table 3. Summary of Descriptive Statistics of the Variables

Stats	Etp	Ecp	Eap	Egd	Pws	Mpp	Twn	Lmx
Mean	3.7992	3.7337	3.5026	3.6482	2.6352	2.6628	2.3455	3.3130
Median	3.8	3.75	3.6	3.6	2.6	2.6	2.2	3.2857
Minimum	2.2	2.625	2.2	1.6	1.4	1.4	1.2	1.714286
Maximum	4.8	4.625	4.6	5	4.2	4.6	4	4.714286
Std.Dev.	0.4309	0.3937	0.4869	0.6273	0.5140	0.5491	0.5565	0.5190
Kurtosis	3.6138	2.5988	2.4410	2.8345	2.7142	3.1969	2.8624	2.8832
Skewness	-0.4897	-0.1875	-0.0323	-0.3153	0.2573	0.3969	0.4322	-0.2630
Obs.	261	261	261	261	261	261	261	261

Source: Authors' Computation (2022)

Table 4. Karl Pearson Correlation Matrix for Employees Task Performance, Ethical Leadership and Leader-Member Exchange

Parameters	Etp	Egd	Pws	Mpp	Twn	Lmx
Etp	1.0000					
Egd	0.0775	1.0000				
Pws	0.0168	0.0906	1.0000			
Mpp	0.0620	-0.0924	-0.0117	1.0000		
Twn	0.0826	-0.0312	0.0401	0.0963	1.0000	
Lmx	0.0915	0.0611	0.0128	0.0098	0.0082	1.0000

Source: Authors' Computation (2022)

RESULTS AND DISCUSSION

Three hundred and twenty-nine (329) copies of questionnaire were administered on the employees of the sampled aluminium manufacturing firms; but two hundred and sixty-one (261) questionnaires were fully completed and retrieved, representing about seventy-nine percent (79%) of the entire survey instrument administered in the field work.

Table 3 shows the summary of descriptive statistics of the dependent (employees job performance), independent (ethical leadership) and moderating (leader-member exchange) variables of the study. Employees job performance was measured by three (3) items (Etp: employees' task performance; Ecp: employees' contextual performance; Eap: employees' adaptive performance) while ethical leadership was measured using four (4) items (Egd: ethical guidance; Pws: power sharing; Mpp: moral perspective; and Twn: Trustworthiness). The descriptive pattern of the mean responses for the subscales (Etp: 3.80; Ecp: 3.73; Eap: 3.50; Egd: 3.65; Pws: 2.64; Mpp: 2.66 and Lmx: 3.31) revealed that all the variables scored above the mean benchmark of 2.50 except Twn: 2.35, which scored below the mean benchmark. This result implies that while aluminium firms use ethical guidance (Egd), power sharing (Pws), and moral perspective (Mpp) as their ethical leadership styles, trustworthiness (Twn) is minimally used by them in promoting employees task, contextual and adaptive performance. The minimum (min) and maximum (max) values of the variables are also shown in Table 3.

The standard deviation (measure of dispersion) values for all the variables are very low (Etp: 0.43; Ecp: 0.39; Eap:

0.49; Egd: 0.63; Pws: 0.51; Mpp: 0.55; Twn: 0.56; Lmx: 0.51); an indication that the views shared by the respondents on ethical leadership, employees' job performance and LMX are not too dispersed from each other and that most likely, they share similar philosophy on how firms in the aluminium industry see and use LMX and ethical leadership in enhancing employees' job performance.

Furthermore, in order to ascertain the shape of distribution of the responses in relation to employees' job performance, leader-member exchange and ethical leadership, the kurtosis results were used. Eap (2.44) had the least kurtosis, which is the smallest possible value of kurtosis and Etp (3.61) the most. In the maximally platykurtic distribution (Eap), which appeared to have its score in its tail, no score is far away from the mean (that is, it has no tail). In the leptokurtic distribution (Etp), this seems only to have a score in its tail and is not farther away from the mean. Besides, the skewness values revealed that while Etp, Ecp, Eap, Egd and Lmx are skewed towards one direction (negatively skewed), Pws, Mpp and Twn are skewed towards the other direction (positively skewed). Overall, all the kurtosis values for the variables are not too far away from the benchmark value of 3; an indication that the variables are normally distributed. To further illustrate the data, the correlation matrix was computed for each measure of the dependent variable.

Table 4 presents the Karl Pearson correlation matrix of a dimension of employees' job performance (employees task performance: Etp) together with four (4) ethical leadership dimensions (Egd, Pws, Mpp, Twn) and the moderating variable (Lmx). The results revealed among others that all

Table 5. Karl Pearson Correlation Matrix for Employees' Contextual Performance, Ethical Leadership and Leader-Member Exchange

Parameters	Ecp	Egd	Pws	Mpp	Twn	Lmx
Ecp	1.0000					
Egd	0.1071	1.0000				
Pws	0.1378	0.0906	1.0000			
Mpp	-0.1593	-0.0924	-0.0117	1.0000		
Twn	-0.0756	-0.0312	0.0401	0.0963	1.0000	
Lmx	0.0469	0.0611	0.0128	0.0098	0.0082	1.0000

Source: Authors' Computation (2022)

Table 6. Karl Pearson Correlation Matrix for Employees' Adaptive Performance, Ethical Leadership and Leader-Member Exchange

Parameters	Eap	Egd	Pws	Mpp	Twn	Lmx
Eap	1.0000					
Egd	0.1137	1.0000				
Pws	0.0697	0.0906	1.0000			
Mpp	0.0954	-0.0924	-0.0117	1.0000		
Twn	-0.0593	-0.0312	0.0401	0.0963	1.0000	
Lmx	-0.0516	0.0611	0.0128	0.0098	0.0082	1.0000

Source: Authors' Computation (2022)

the variables of ethical leadership and leader-member exchange are positively correlated with employees' task performance (Etp). This implies that there is a positive relationship between employees' task performance, ethical leadership and leader-member exchange. More also, none of the Karl Pearson correlation coefficients exceeds 0.8, an indication of the absence of multi-collinearity problem in the empirical model of the employees' task performance, ethical leadership and leader-exchange member relationship.

Table 5 presents the Karl Pearson correlation matrix of a dimension of employees' job performance (employees' contextual performance: Ecp) together with four (4) ethical leadership dimensions (Egd, Pws, Mpp, Twn) and moderating variable (Lmx). The results revealed among others that all the variables of ethical leadership (Egd, Pws) and leader-member exchange (Lmx) are positively correlated with Ecp except Mpp (-0.1593) and Twn (-0.0756) that are negatively correlated. This implies that there is a positive relationship between employees' contextual performance, ethical guidance, power sharing, and leader-member exchange.

On the other hand, a negative relationship was found between employees' contextual performance, moral perspective and trustworthiness. Interestingly, none of the Karl Pearson correlation coefficients exceeded 0.8; an indication of the absence of multi-collinearity problem in the empirical model of the employees' contextual performance, ethical leadership and leader-exchange member relationship.

Table 6 shows the correlation matrix of employees' adaptive performance (Eap) together with four (4) ethical leadership dimensions (Egd, Pws, Mpp, Twn) and

moderating variable (Lmx). The results revealed that some variables of ethical leadership (Egd, Pws, Mpp) are positively correlated with employees' adaptive performance (Eap) while Twn (-0.0593) and Lmx (-0.0516) that are negatively correlated. This implies that there is a positive relationship between employees' adaptive performance, ethical guidance, power sharing and moral perspective.

On the other hand, a negative relationship was found between employees' adaptive performance, trustworthiness and leader-member exchange. Again, none of the correlation coefficients exceeded 0.8; an indication of the absence of multi-collinearity problem in the empirical model of the employees' adaptive performance, ethical leadership and leader-exchange member relationship.

Clearly, from Tables 4-6, all the empirical models (models 1-3) showing the moderating effect of leader-member exchange in the relationship between the three (3) dimensions of employees' job performance (task, contextual and adaptive) and the four (4) ethical leadership dimensions (ethical guidance, power sharing, moral perspective and trustworthiness) do not show any sign of multi-collinearity problems, hence the data set of the study are considered good enough in conducting further statistical tests in order for the study to make inferences.

Test of Hypotheses

Structural Equation Modeling (SEM) Results

The test of hypotheses is done using SEM. To use SEM, certain fit indices need to be computed. There are several fit indices which studies employ to assess the existence of

Table 7. Fit Indices

Fit Statistics	Value	Description
Likelihood Ratio		
Chi2_ms(3)	0.393	Model vs. Saturated
P > chi2	0.942	
Chi2_bs(22)	32.64	Baseline vs. Saturated
P > chi2	0.067	
Population Error		
RMSEA	0.000	Root mean Squared Error Of Approximation
Pclose	0.976	Probability RMSEA <= 0.05
Baseline Comparison		
CFI	1.000	Comparative Fit Index
TLI	2.796	Tucker-Lewis Index
Size of Residuals		
SRMR	0.006	Standardized Root Mean Squared Residual
CD	0.104	Coefficient of Determination

Source: Authors' Computation (2022)

an adequate fit between the empirical models and the data set. Some of these fit indices are: Chi-square/Degree of freedom (χ^2/df), Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), Root Mean Squared Error of Approximation (RMSEA), and Adjusted Goodness of Fit Index (ADFI). The results in Table 7 reveal a good model fit with the study's data set.

The cut-off thresholds for the fit indices are: $\chi^2/df < 3$; CFI = > 0.90; TLI = > 0.95; RMSEA = < 0.08; and ADFI = > 0.90. Table 7 showed the results of the confirmatory factor analysis (CFA) as well as the cutoff criteria as identified by Kline (2005). The goodness of fit indicates how well the specified model reproduces the observed covariance matrix among the indicator items (that is, similarity of observed and estimated covariance matrices). Notably, all the fit indices beat the cutoff thresholds, suggesting that the models demonstrate a good fit to the data adequately.

Test of Hypothesis 1: LMX does not significantly moderate the relationship between ethical leader and employees' task performance. Using model 1, the results are as presented.

Structural equation modeling (SME) was used in assessing the path coefficients (Tables 8a-8b and Figure 1) for the testing of the hypothesis. Overall, the results show that the hypothesis should be accepted because as shown in Table 8a-8b, a positive but insignificant moderating effect exists in the relationship between employees' task performance and ethical leadership ($z = 1.48, p = 0.138$).

Test of Hypothesis 2: LMX does not significantly moderate the relationship between ethical leadership and employees' contextual performance. Using model 2, the results are as presented.

Again, SEM was used in assessing the path coefficients (Tables 9a-9b and Figure 2) to test the hypothesis. This hypothesis was accepted because as shown in Tables 9a-9b, a positive and insignificant moderating effect exists in the relationship between employees' contextual performance and ethical leadership ($z = 0.76, p = 0.448$).

Test of Hypothesis 3: LMX does not significantly

moderate the relationship between ethical leadership dimensions and employees' adaptive performance. Using model 3, the results are as presented.

The SEM result used in assessing the path coefficients are as presented (Table 10a-10b and Figure 3). With the results the hypothesis was accepted because a negative and insignificant moderating effect exists in the relationship between employees' adaptive performance and ethical leadership ($z = 0.83, p = 0.404$).

Test of Composite Model

To further illuminate the analysis, an attempt was made to test all the dimensions of the dependent, independent, and moderating variables together as a composite model. The outcome of this is presented in Tables 11a, 11b and Fig 4.

Using the aggregate path results, Table 11a-11b and Figure 4 (displayed in the appendix), it was found that while LMX does not moderate the joint relationship between employees' task performance (ETP) and ethical leadership as well as employees' adaptive performance, LMX was found to moderate the joint relationship between employees' contextual performance and ethical leadership (particularly power-sharing and moral perspective). Overall, the results on Table 11b indicated that no path was found for leader-member exchange in the relationship between employees' job performance and ethical leadership.

The SEM results show that though leader-member exchange has a positive moderation, but does not significantly moderate the relationship between ethical leadership and employees' task performance. The finding of our study is at variance with the empirical result of Insan and Masmarulan (2021) in Makassar who found that leader-member exchange moderates the relationship between ethical leadership and employees' task performance. The disagreement may be linked with cross-country differentials of policies and the organizational structure in Makassar which do not actually encourage

Table 8a: Path Coefficients for Direct, Indirect and Total Effects of Dimensions for Employees' Task Performance, Ethical Leadership and Leader-Member Exchange

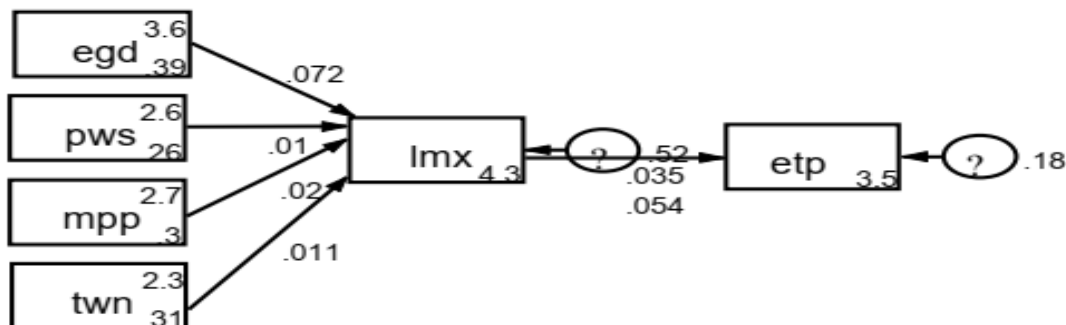
Parameters	Coefficient	Standard Error	Z-score	P>/z/
Structural				
Lmx <- Egd	0.0718	0.0721	1.00	0.319
Pws	0.0099	0.0877	0.11	0.910
Mpp	0.0195	0.0824	0.24	0.813
Twn	0.0110	0.0811	0.14	0.892
_cons.	4.2719	0.4473	9.55	0.000
Etp <- Lmx	0.0542	0.0365	1.48	0.138
_cons.	3.5476	0.1715	20.67	0.000
LR test of model vs. Saturated: chi2(4)	=	4.24;	Prob. > chi2	=
				0.3748

Source: Authors' Computation (2022)

Table 8b: Significance Testing of Indirect Effects (Unstandardized)

Parameters	Coefficient	Standard Error	Z-score	P>/z/
Structural				
Lmx <- Egd	0	(no path)		
Pws	0	(no path)		
Mpp	0	(no path)		
Twn	0	(no path)		
Etp <- Lmx	0	(no path)		
Egd	0.0038	0.0047	0.83	0.408
Pws	0.0005	0.0047	0.11	0.910
Mpp	0.0010	0.0045	0.23	0.815
Twn	0.0005	0.0044	0.14	0.892

Source: Authors' Computation (2022)

**Figure 1:** Path Diagram (2022)**Table 9a:** Path Coefficients for Direct, Indirect and Total Effects of Dimensions for Employees' Contextual Performance, Ethical Leadership and Leader-Member Exchange

Parameters	Coefficient	Standard Error	Z-score	P>/z/
Structural				
Lmx <- Egd	0.0718	0.0721	1.00	0.319
Pws	0.0099	0.0877	0.11	0.910
Mpp	0.0195	0.0824	0.24	0.813
Twn	0.0110	0.0811	0.14	0.892
_cons.	4.2719	0.4473	9.55	0.000
Scp <- Lmx	0.0406	0.0536	0.76	0.448
_cons.	5.7854	0.2516	22.99	0.000
LR test of model vs. Saturated: chi2(4)	=	14.55;	Prob. > chi2	=
				0.0057

Source: Authors' Computation (2022)

Table 9b. Significance Testing of Indirect Effects (Unstandardized)

Parameters		Coefficient	Standard Error	Z-score	P>/z/
Structural					
Lmx <-	Egd	0	(no path)		
Pws		0	(no path)		
Mpp		0	(no path)		
Twn		0	(no path)		
Scp <- Lmx		0	(no path)		
Egd		0.0029	0.0048	0.60	0.546
Pws		0.0004	0.0036	0.11	0.911
Mpp		0.0007	0.0035	0.23	0.821
Twn		0.0004	0.0033	0.13	0.894

Source: Authors' Computation (2022)

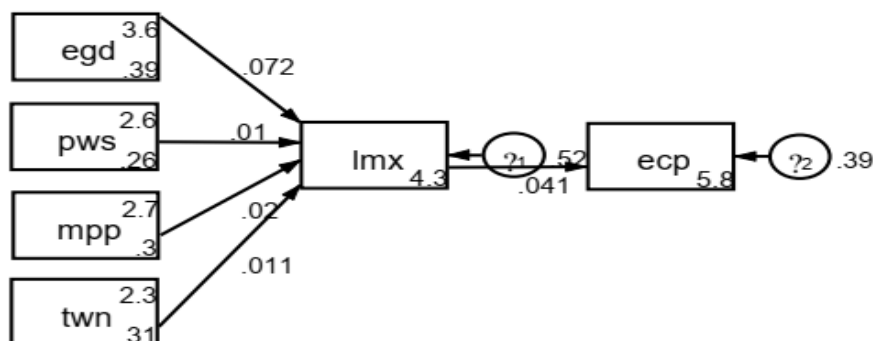


Figure 2: Path Diagram (2022)

Table 10a: Path Coefficients for Direct, Indirect and Total Effects of Dimensions for Employees' Adaptive Performance, Ethical Leadership and Leader-Member Exchange

Parameters		Coefficient	Standard Error	Z-score	P>/z/
Structural					
Lmx <-	Egd	0.0718	0.0721	1.00	0.319
Pws		0.0099	0.0877	0.11	0.910
Mpp		0.0195	0.0824	0.24	0.813
Twn		0.0110	0.0811	0.14	0.892
_cons.		4.2719	0.4473	9.55	0.000
Scp <-	Lmx	0.0406	0.0536	0.83	0.404
_cons.		5.7854	0.2516	22.99	0.000
LR test of model vs. Saturated: chi2(4)		=	14.55;	Prob. > chi2	= 0.0057

Source: Authors' Computation (2022)

Table 10b: Significance Testing of Indirect Effects (Unstandardized)

Parameters		Coefficient	Standard Error	Z-score	P>/z/
Structural					
Lmx <-	Egd	0	(no path)		
Pws		0	(no path)		
Mpp		0	(no path)		
Twn		0	(no path)		
Scp <- Lmx		0	(no path)		
Egd		0.0029	0.0048	0.60	0.546
Pws		0.0004	0.0036	0.11	0.911
Mpp		0.0007	0.0035	0.23	0.821
Twn		0.0004	0.0033	0.13	0.894

Source: Authors' Computation (2022)

Table 11a: Path Diagram for All Employees' Job Performance Dimensions (ETP, ECP, EAP), Ethical Leadership (EGD, PWS, TWN, MPP) and Leader-Member Exchange (LMX)

Parameters	Coefficient	Standard Error	Z-score	P>/z/
Structural				
Etp <- Lmx	0.0505	0.0363	1.39	0.164
Egd	0.0548	0.0424	1.29	0.196
Pws	0.0050	0.0515	0.10	0.922
Mpp	0.0479	0.0484	0.99	0.322
Twn	0.0605	0.0476	1.27	0.203
_Cons.	3.0815	0.3050	10.10	0.000
Structural				
Ecp <-Lmx	0.0367	0.5223	0.70	0.481
Egd	0.0775	0.0610	1.27	0.204
Pws	0.1606	0.0740	2.17	0.030
Mpp	-0.1661	0.0695	-2.39	0.017
Twn	-0.0733	0.0684	-1.07	0.284
_Cons.	5.7113	0.4385	13.02	0.000
Structural				
Eap <- Lmx	-0.0404	0.0408	-0.99	0.322
Egd	0.0931	0.0476	1.95	0.051
Pws	0.0603	0.0578	1.04	0.297
Mpp	0.1015	0.0543	1.87	0.062
Twn	-0.0600	0.0534	-1.12	0.261
_Cons.	3.0619	0.3425	8.94	0.000
Structural				
Lmx<- Egd	0.0718	0.0721	1.00	0.319
Pws	0.0099	0.0877	0.11	0.910
Mpp	0.0195	0.0824	0.24	0.813
Twn	0.0110	0.0811	0.14	0.892
Cons.	4.2719	0.4473	9.55	0.000
LR test of model vs. Saturated: chi2(3) = 0.39; Prob. > chi2 = 0.9417				

Source: Author's Computation (2022)

Table 11b: Significance Testing of Indirect Effects (Unstandardized)

Parameters	Coefficient	Standard Error	Z-score	P>/z/
Structural				
Etp <- Lmx	0	(no path)		
Egd	0.0036	0.0048	0.81	0.418
Pws	0.0005	0.0044	0.11	0.910
Mpp	0.0009	0.0042	0.23	0.815
Twn	0.0005	0.0041	0.14	0.892
Ecp <- Lmx	0	(no path)		
Egd	0.0026	0.0045	0.57	0.565
Pws	0.0003	0.0032	0.11	0.911
Mpp	0.0007	0.0031	0.22	0.822
Twn	0.0004	0.0030	0.13	0.894
Eap <- Lmx	0	(no path)		
Egd	-0.0029	0.0041	-0.70	0.483
Pws	-0.0004	0.0035	-0.11	0.910
Mpp	-0.0007	0.0034	-0.23	0.818
Twn	-0.0004	0.0033	-0.13	0.893
Lmx<- Egd	0	(no path)		
Pws	0	(no path)		
Mpp	0	(no path)		
Twn	0	(no path)		

Source: Author's Computation (2022)

or promote leader-member exchange role by management. Again, the SEM results revealed that leader-member

exchange does not significantly moderate the relationship between ethical leadership and employees' contextual

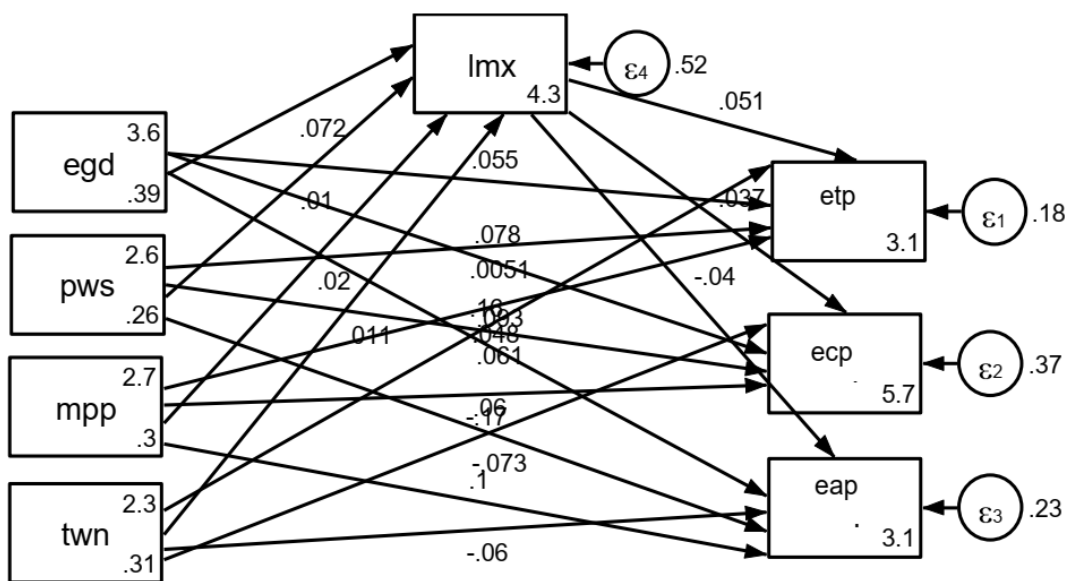


Figure 4: Aggregate Path Diagram (2022)

performance. This result, in part, is at variance with the empirical results of Riaz and Zaman (2018) and Yildiz (2018). Furthermore, the SEM results revealed that leader-member exchange does not significantly moderate the relationship between ethical leadership and employees' adaptive performance. Again, this result in part is at variance with the empirical results of Karabey and Aliogullari (2018), Riaz and Zaman (2018); and Yildiz (2018). Thus, these findings call for some policy implication for management of Nigerian firms.

CONCLUSION

This study has attempted an examination of the moderating impact of ethical leadership and employees' job performance in Nigerian aluminium manufacturing firms. This is against the backdrop that LMX has not been demonstrated as a core mechanism that predicts the nature of relationship between various ethical leadership dimensions and employees' job outcomes. The poor performance and other counterwork behaviours amongst employees in organisations, particularly in aluminium firms in Nigeria are traced to unethical leadership in such firms. The leaders exhibit strict conducts, which include sustaining rigid chain of command and elevated power distance, information control, laying aside subordinates' ideas and contributions, ascribing failures only to subordinates and dishing out punishments, leaving no choice for the subordinates than to portray fear of their leaders. In this study, and with reference to the manufacturing sector that was examined, LMX did not show significant moderating power in the link between ethical leadership and employees' performance. However, the

relationship was positive implying that there is the tendency to increase employees' performance. In the light of these, the study concludes that leader-member exchange does not significantly moderate the relationship between ethical leadership and employees' job performance in Nigerian aluminium manufacturing firms.

Conflict of Interests

The authors declare that there is no conflict of interests regarding the publication of the paper.

REFERENCES

- Agha NC, Nwekpa KC, Eze OR (2017). Impact of ethical leadership on employee commitment in Nigeria – A study of Innoson Technical and Industrial Company Limited, Enugu, Nigeria. *Int. J. Develop. Manag. Rev.*12 (1): 202-214.
- Ahmed I, Ismail WKW, Amin SM, Ramzan M, Khan MK (2012). A look at social exchange at work: A literature survey approach. *World Appl. Sci. J.* 19(7): 951-956.
- Audrey CV, Patrice R (2012). Adaptive performance: A new scale to measure individual performance in organizations. *Canadian J. Administrative Sci.* 29(2): 280-293.
- Bello SM (2012). Impact of ethical leadership in employee job performance. *Int. J. Bus. Soc. Sci.* 3(11): 228-236.
- Bubble M (2012). Interdependence of organizational culture and leadership styles in large firms. *Management Journal of Contemporary Management Issues.* 17(2): 85-97.
- Casimir G, Ngee-Keith Y, Yuan-Wang K, Ooi G (2014). The

- relationships amongst leader-member exchange, perceived organizational support, affective commitment, and in-role performance: A social-exchange perspective. *Leadership and Organizational Development Journal*. 35: 366–385.
- Dulebohn J, Bommer W, Liden R, Brouer R, Ferris G (2012). A meta-analysis of antecedents and consequences of leader-member exchange: Integrating the past with an eye toward the future. *J. Management*. 36(6): 1715–1759.
- Epitropaki O, Martin R (2013). Transformational-transactional leadership and upward influence: The role of relative leader-member exchanges (RLMX) and perceived organizational support (POS). *The Leadership Quarterly*. 24(2): 299–315.
- Graen GB, 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.
- Graves LM, Sarkis J, Zhu Q (2013). How transformational leadership and employee motivation combine to predict employee pro-environmental behaviors in China. *J. Environ. Psychol.* 35: 81–91.
- Guo Y, Chen L, Song LJ, Zheng X (2021). How LMX differentiation attenuates the influence of ethical leadership on workplace deviance: The mediating role of psychological empowerment. *Frontiers in Psychology*. 12(6): 1–13.
- Hair JF, Ringle CM, Sarstedt M (2011). PLS-SEM: Indeed, a silver bullet. *J. Marketing Theory and Practice*. 19(2): 139–152.
- Hasib FF, Eliyana A, Arief Z, Pratiwi, AA (2020). The effect of transformational leadership on employee performance mediated by leader-member exchange. *Systematic Reviews in Pharmacy*. 11(11): 1199–1209.
- Iis EY, Yunus M, Adam M, Sofyan H (2018). Antecedent model of empowerment and performance of Aceh Government with motivation as the intervening variable. *The J. Soc. Sci. Res.* 2: 743–747.
- Imran M, Tanveer A (2015). Impact of training and development on employees' performance in banks of Pakistan. *European Journal of Training and Development Studies*. 3(1): 22–44.
- Insan AN, Masmarulan R (2021). Effects of leader-member exchange and organizational culture on work engagement and employee performance. *Management Science Letters*. 11(2): 879–886.
- Johnson DW (2003). Social interdependence: interrelationships among theory, research, and practice. *American Psychologist*. 58(11): 934–945.
- Kalshoven K, Den Hartog D, De Hoogh A (2011). Ethical leadership at work questionnaire (ELW): Development and validation of a multidimensional measure. *Leadership Quarterly*. 22: 51–69.
- Karabey CN, Aliogullari ZD (2018). The impact of ethical leadership on member's creativity and career success: The mediating role of leader-member exchange. *Research Journal of Business and Management*. 5(3): 202–211.
- Kim SL, Han S, Son SY, Yun S (2017). Exchange ideology in supervisor-subordinate dyads, LMX, and knowledge sharing: A social exchange perspective. *Asia Pacific Journal of Management*. 34: 147–172.
- Kline RB (2005). *Principles and Practice of structural equation modeling*. 2nd ed. New York: Guilford Press.
- Koopmans L, Berhnaards CM, Hildebrandt VH, Vet HC, Berk, AJ (2014). Construct validity of the individual work performance questionnaire. *Journal of Occupational and Environmental Medicine*. 56(3): 154–171.
- Koopmans L, Bernaards CM, Hildebrandt VH, Schaufeli, WB, De Vet, HC, van der Beek A J (2011). Conceptual frameworks of individual work performance: A systematic review. *J. Occupational and Environmental Medicine*. 53(8): 856–866.
- Liden RC, Maslyn JM (2018). Multidimensionality of leader-member exchange: An empirical assessment through scale development. *J. Management*. 24(1): 43–72.
- 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.
- Martin R, Guillaume Y, Thomas, G, Lee A, Epitropaki O (2016) Leader-member exchange. LMX performance: A meta-analytic review. *Personnel Psychology*. 69: 67–121.
- Monahan K (2021). A review of literature concerning ethical leadership in organizations. *Emerging Leadership Journal*. 5(1): 56–66.
- Ng TW, Feldman DC (2015). Ethical leadership: Meta-analytic evidence of criterion-related and incremental validity. *Journal of Applied Psychology*. 100(3): 948–965.
- Niemeyer JR, Cavazotte, FS (2016). Ethical leadership, leader-follower relationship and performance: A study in a telecommunications company. *Ram, Rev. Adm. Mackenzie*, 17(2):67–92.
- Oates V, Dalmau T (2013). Ethical leadership: A legacy for a Stronger Future Performance, *Journal of Environmental Psychology*. 35: 20–27.
- Podsakoff PM, MacKenzie SB, Moorman RH, Fetter R (1990). Transformational Leader Behaviors and their Effects on Followers' Trust in Leader, Satisfaction, and Organizational Citizenship Behaviors. *The Leadership Quarterly*. 1, 107–142.
- Pradhan RK, Jena LK (2017). Employee performance at workplace: Conceptual model and empirical validation. *Business Perspectives and Research*. 5(1): 1–17.
- Rabenu E, Shkoler O, Lebron MJ, Tabak F (2019). Heavy-work investment, job engagement, managerial role, person-organization value congruence, and burnout: A moderated-mediation analysis in USA and Israel. *Curriculum Psychology*. 38: 1–18.
- Riaz A, Zaman S (2018). Impact of ethical leadership on organizational cronyism through mediating role of ethical culture and moderating role of leader member exchange. *Pakistan Journal of Commerce and Social Sciences*. 12(3): 831–850.
- Rich KL (2013). Introduction to ethics. In: *Nursing ethics across the curriculum and into practice*, (3rd Ed) MA:

- Jones & Bartlett Publishers.
- Schepers JM (2011). The construction and evaluation of a generic work performance questionnaire for use with administrative and operational staff. *SA J. Industrial Psychol.* 34(1): 10-22.
- Seejeen P (2017). The effects of the leader-member exchange relationship on rater accountability: A conceptual approach. *Cogent Psychology.* 4(1): 40-57.
- Sharoni G, Shkoler O, Tziner A (2015). Job engagement: Antecedents and outcomes. *J. Organizational Psychology.* 15: 34-48.
- Shusha A (2013). The mediating role of leader-member exchange in the relationship between transformational leadership and job performance. *European J. Business and Management.* 5(8): 157-164.
- Walumbwa FO, Mayer DM, Wang P, Wang H, Workman K, Christensen AL (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.
- Williams E, Scandura TA, Pissaris S, Woods JM (2016). Justice perceptions, leader-member exchange, and upward influence tactics. *Leadership & Organization Development Journal.* 37(7): 25-41.
- Yamane T (1967). *Statistics: An introductory analysis.* 2nd Edition. New York: Harper and Row.
- Yildiz SM (2018). An empirical analysis of the leader-member exchange and employee turnover intentions mediated by mobbing: Evidence from sport organisations. *Economic Research.* 31(1): 480-497.