EMPLOYEE EMPOWERMENT, ENGAGEMENT, LEADER-MEMBER EXCHANGE AND INNOVATIVE WORK BEHAVIOUR AMONG EMPLOYEES IN MANUFACTURING FIRMS IN NAIROBI, KENYA

BY

MERCY KANANU KANAKE

A THESIS SUBMITTED TO THE SCHOOL OF BUSINESS & ECONOMICS, DEPARTMENT OF MANAGEMENT SCIENCE IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF DOCTOR OF PHILOSOPHY DEGREE IN BUSINESS MANAGEMENT

MOI UNIVERSITY

2020

DECLARATION

Declaration by the Candidate

This thesis is my original work and has not been presented for a degree in any other institution. No part of this research should be reproduced without prior permission from the author and/or the institution.

Signature…….Date ….....

Mercy Kananu Kanake

REG. NO: SBE/D.Phil/BM/021/15

Declaration by the Supervisor

This thesis has been submitted with our approval as the university supervisors.

Signature…….Date ….....

Dr. Ambrose Kemboi
Department of Management Science & Entrepreneurship
School of Business and Economics
Moi University

Signature…….Date ….....

Dr. Joel Tenai
Department of Accounting & Finance
School of Business and Economics
Moi University

DEDICATION

This doctoral research is dedicated to my Husband Prof. Henry Kirimi and my daughters Lisa and Laureen who believed in my ability to achieve this goal. All your love, support, and encouragement have enabled me to reach this far. Without you all I could not have imagined doing this.

ACKNOWLEDGEMENT

I express my thanks to the Almighty God for the blessing of good health, wisdom, and knowledge during this journey. My utmost humble appreciation is to my supervisors Dr. Ambrose Kemboi and Dr. Joel Tenai for their valuable guidance, encouragement, and assistance throughout the development of this thesis.

My sincere appreciation goes to the staff of Moi University, School of Business and Economics for their contribution at personal as well as professional levels to this milestone. I cannot forget to thank my friend Molly Awino for her enlightening discussions, encouragement, and insightful comments in the process of writing this thesis. To my diligent research assistants Valentine Kariuki and Martin, I say thank you for your strong-willed determination to collect data under challenging conditions. I express my gratitude to the owners of the manufacturing firms in Industrial Area, Nairobi, without whose participation, goodwill, and patience this study would not have been what it is today.

I take this opportunity to thank the ASALI Project (A Sustainable Approach to Livelihood Improvement) for offering me financial assistance to complete my research.

My warm and heartfelt thanks go to my family, my husband for providing financial and moral support and my daughters for sticking by me in the days and nights that it took to finish this study. Not to forget my parents who provided me with support, encouragement and love.

ABSTRACT

In the globalized economies, innovation is recognized as a key determinant of the organization's long-term sustainability, productivity, and development. Previous researchers have acknowledged the important role which empowerment of employees' plays in nurturing innovativeness. However, the link between employee empowerment and innovative work behaviour has mainly been examined in developed countries, yet understanding such a link from a developing country like Kenya is equally important. Additionally, the role of employee empowerment on innovative work behaviour (IWB) has not been exhaustively explored. Theory demonstrates that leader-member exchange (LMX) and employee engagement can enhance the relationship between employee empowerment and IWB. This study sought to contribute to this growing body of knowledge by exploring the effect of employee empowerment, engagement, LMX and IWB among employees in manufacturing firms in Nairobi, Kenya. The study was guided by eight specific objectives which sought to evaluate the effect of; employee empowerment on IWB, employee engagement on IWB, leader-member exchange on IWB, employee empowerment on employee engagement, the mediating effect of employee empowerment on IWB through employee engagement, the moderating effect of LMX on the relationship between employee empowerment and employee engagement, the moderating effect of leader-member exchange on the relationship between employee engagement IWB and the moderated mediation effect of LMX on the indirect effect of employee empowerment on IWB through employee engagement. The study was grounded in positivist paradigm and adopted the explanatory research design. The study was anchored on Innovative Systems Theory as the main theory supported by Social-Exchange theory, Kantar's theory of structural empowerment and Self Determination Theory. The study targeted 23 manufacturing firms with a study population of 9915 employees. A sample size of 470 employees was selected based on Yamane's formula of sample size determination. Stratified and systematic sampling techniques were used to select the required sample. Data were analysed using both descriptive statistics and inferential statistics. The descriptive statistics included means and standard deviations; while inferential statistics employed hierarchical linear regression and multiple regression analyses for hypothesis testing. The study revealed the following key findings: employee empowerment (β=.452, P=.001), employee engagement (β=.391, P=.001), and LMX (β=.188, P=0.001) had positive and significant effects on IWB; employee empowerment had a positive and significant effect on employee engagement (β=.507, P=.001); employee engagement partially mediated the relationship between employee empowerment and IWB (β=.260, CI=.178, .355) and that LMX had an antagonistic moderating effect on the relationship between employee engagement and IWB (β=-.093, P=.05, CI=.-.161,-.025). The study recommends that the management of manufacturing firms should adopt policies that take into account issues of employee empowerment, engagement and LMX practices in order to enhance employees' innovative behaviour.

TABLE OF CONTENT

LIST OF TABLES

LIST OF FIGURES

OPERATIONAL DEFINITION OF TERMS

Employee empowerment	Is the degree to which decision-making power, authority to take and execute, and get hands on resources and information for use by individuals at the lower end of the organizational structure is enhanced (Kanter, 1993)
Employee engagement	Is a positive, fulfilling work related state of mind that is characterised by vigour, dedication, and absorption (McEwen, 2011)
Leader member exchange	Is a relationship-based approach to leadership that focuses on the two-way relationship between leaders and followers (Dulebohn, Bommer, Liden, Brouer, & Ferris, 2012)
Innovative work behaviour	An intentional creation, introduction, and application of new ideas within a work role, group or organization, in order to benefit role performance, the group or the organization (King & Anderson, 2002).
Reward	is a monetary or non-monetary benefit given to employees as a recognition of service, effort, or achievement by the employers(Nusrat, 2018)
Information	is the access to the data that is related to organisational objectives and strategy (Vacharakiat, 2008)

LIST OF ABBREVIATIONS

GDP	Gross Domestic Product
HR	Human Resource
HRM	Human Resource Management
IWB	Innovative Work Behaviour
KAM	Kenya Association of Manufacturers
LMX	Leader Member Exchange
PCA	Principle Component Analysis
SDT	Self Determination Theory
SET	Social Exchange Theory
MOYA	Ministry of Youth Affairs
KNYP	Kenya National Youth Policy
UNDP	United Nation Development Programme
NACOSTI	National Commission of Science Technology and Innovation

CHAPTER ONE

INTRODUCTION

1.0 Overview

This chapter deals with introduction of the study in view of the relevant Independent variable, Mediation moderator and the Dependent Variables. It commenced by exploring the background information about the topic of study, statement of the problem, the objectives and hypotheses, significance and scope in the course of carrying out this survey.

1.1 Background of the Study

Innovative work behaviour is recognized as a fundamental practice with potential to provide solutions to emerging social and economic challenges, and is therefore well poised to drive economic growth among organizations (De Spiegelaere, Van Gyes, De Witte, Niesen, & Van Hootegem, 2014). For an organisation to maintain their competitiveness particularly in today's highly competitive global market and business environment and to be able to solve the deadlock, the most substantial way for enhancing productivity is if its employees can perform innovative behaviour (Nurgraha & Mulyadi, 2018; Pieterse, Van Knippenberg, Schippers, & Stam, 2010). Lin and Lee (2017) indicated that the innovative behaviour of employees is about applying unique and useful ideas to products and the way employees does their job. In addition, innovative behaviour can be seen as a multi-stage phase across many different areas, which include; Identification and development of new opportunities, resource acquisition, implementation and promotion and process of application (Kanter, 1988). Scott and Bruce (1994) postulated that the innovative behaviour of an individual can be divided into three stages; recognizing a problem and developing new ideas or solutions, seeking to identify innovative ideas and create an alliance with

supporters and building archetypes or models of innovation so that they can be created in a large number and become a preferable way so that innovativeness can be realized. Indeed, scholars have demonstrated that IWB is all about employee behaviour directed towards the generation, introduction, and use of organizational procedures, processes, ideas or products; while at the same time encouraging implementation of novel ideas generated amongst the employees, and which when adopted have potential to improve processes and products (De Spiegelaere *et al.*, 2014; Yuan & Woodman, 2010).

Although innovative work behaviour has been seen to improve organisations' outcome, this cannot happen without inclusion of individuals. The human resource is regarded as the critical determinant of organizational failure or success and an overall outcome of the organisation (Scott & Bruce, 1994). Employees are seen as an important source by firms in gaining a sustained competitive advantage (Elrehail et al., 2019). In order to remain competitive and thrive in these complex market conditions, the increasingly evolving business environments contribute to greater demand and involvement in innovative work behaviours of employees (Ramamoorthy, Flood, Slattery, & Sardessai, 2005; Shanker, Bhanugopan, Van der Heijden, & Farrell, 2017). Previous authors agree and emphasise on the importance of employee innovative behaviour since it can contribute to overall effectiveness for organizations in dynamic business environments (Yuan & Woodman, 2010). Innovation work behaviour among employees is therefore associated with diverse factors. For instance it is argued that in view of the increasing significance of innovation in organizational competitiveness, the conditions made available through which employees can elicit, their innovative behaviour remain critical (Alkhodary,

2016; Bos-Nehles, Renkema, & Janssen, 2017; Jada, Mukhopadhyay, & Titiyal, 2019).

To gain such crucial contribution, previous studies argue that many human resource management factors contribute to IWB, and these factors need to be explored to bring more understanding on this matter (Dan *et al.,* 2018). Most of the past literature have investigated the linkage between IWB with practices used in management of human resources (HRM); Innovative Work behaviour as portrayed within the organization; the exchange that exists between leaders and members; psychological empowerment; autonomy of the job, engagement, and job security (De Spiegelaere, Van Gyes, De Witte, & Van Hootegem, 2015). Other scholars have in addition shown that IWB is a function of employee empowerment (Dan *et al.,* 2018). Considering then that employee empowerment is a critical facet of motivation in the organization, it was included in the current study as a predictor of IWB.

Empowerment is a fundamental and important aspect for successful achievement, productivity, innovative behaviour and growth in any organisation (Hanaysha, 2016). Employee empowerment is perceived to be a motivational practice aimed at increasing innovation by increasing participation opportunities and involvement in decision-making. It is primarily about building trust, inspiration, engaging in decision-making and eliminating any boundaries between an employee and top management (Kim & Fernandez, 2017). Empowerment is the degree to which employees are given authority to make decision and is often allied with the distribution of responsibility from managers to other employees (Saif & Saleh, 2013). Empowerment was previously described as giving the employees of an organization the authority to deal with issues related to their daily work activities. (Longman, 1998). Jacquiline (2014) stated that empowered employees are likely to develop

feelings of motivation that will help them to gain the authority and control and apply the crucial knowledge and skills for dealing with customer needs. As the empowerment programme aims to give power and authority to employees through managers to share the responsibility with them, this will eventually help empowered employees in improving their innovativeness. Such employees would develop positive thinking and tend to do their best to perform well at the workplace (Wadhwa & Verghese, 2015). Employee empowerment is a relational concept from a managerial perspective that explains how those with power in organizations share power, knowledge, resources, and rewards with those below them. Empowering employees' is known to gain more prominence, when employees are accorded opportunities to showcase their innovativeness by contributing novel ideas that can lead to successful completion of assigned tasks (Bowen & Lawler III, 2006). Berraies, Chaher, and Yahia (2014) however point out that despite employee empowerment being vital; its effect on innovativeness among employees is parsimonious and usually unconvincing. Some studies have demonstrated the impact on innovative work behaviour which comes with empowering employees(Anjum, Sabir, & Hussain, 2016; ul Haq, Usman, & Khalid, 2018). The argument posited among these pro-empowerment scholars is that, delegating power, teamwork, shared vision and knowledge creates an environment relevant for employees to feel empowered, to maximize their expertise and knowledge, and to be more creative and innovative.

Kanter (1997) developed an organizational power structural theory that explains how power is extracted from three sources: supply lines, particularly to essential external resources; information lines, including task-related knowledge, performance feedback, and other information about what is happening within the organization; and support lines, including top management. Empowerment has also been associated

with adverse impacts on innovativeness among employees. Azmee and Kassim (2019) for instance used cultural characteristics to show that empowerment related negatively and in a negligible way with innovation. The conclusion they made was that motivated workers elicited contradictory emotions when asked to make decisions on tasks to be accomplished, and the degree of innovativeness required. Such contradictory emotions are best explained by the structural empowerment theory (Kanter, 1997). The theory explains how employee's attitude and behaviour outcomes are influenced by the work environment. Kanter states that employee empowerment structures contribute to how well employees do their work.

Another possible indicator of IWB is employee engagement which indicates that when employees have an affective and cognitive connection with their managers, they become great advocates of the organization to the customers and this leads to improvement of organisation outcomes (Abraham, 2012). It is argued that an engaged employee has a passion for the job and shows a strong connection to the organization (Schneider, Macey, Barbera, & Martin, 2009). The fundamental aim of the current research study was, to inspect thoroughly, the degree of engagement elicited by employees', employee empowerment and innovative work behaviour, and how these concepts affect or predict each other. The undertaking explored whatever effect employee engagement had in mediating the linkage connecting employee empowerment to their innovativeness.

Evidence existing in the extant literature confirms that managers are critical to employees' acquisition behaviour suited towards innovativeness in tasks assigned (Dulebohn *et al.,* 2012). Dulebohn and colleagues contend that managers are in a position to nurture innovativeness among employees by providing the enabling environment and also giving the necessary treatment which can push employees

creativity beyond the formal job contract. They argue further that, the relationship between managers and employees' helps the latter to be aware of the needs and expectations which might improve IWB. It is argued that by virtue of their position of influence, managers' decisions are bound to be antecedents of attitudes and behaviour that employees acquire. In line with this, the relationship between leaders and their subordinates can be clarified through Social Exchange Theory (Kuvaas, Buch, Dysvik, & Haerem, 2012) which, posits that exchange relationships are anchored in economic or social principles. Consequently, basing on this theory of social exchange, levels of employee motivation vary as they experience different rewards (Janssen, 2000). When employees are rewarded, they in-turn reciprocate with higher levels of IWB. In view of these arguments, it is concluded that managers through their management behaviour, are critical to the development and acquisition of behaviour that is supportive of innovativeness across employees'.

A survey by Kenya Association of Manufacturers (KAM, 2018) lauds Kenya's manufacturing sector for remaining fundamental in the alleviation of poverty in the country. KAM points out that the sector is a front runner in the sustenance of economic growth, poverty alleviation, and job creation. Moreover, the Economic survey underscores the sector's role in the stability of Kenya's economic development agenda which is leveraged upon foreign exchange and direct investment (Economic Survey, 2018). Being concerned with the stagnation of the sector's contribution to the GDP at 10%, Kenya has set sights to a contribution of 15% to the GDP from the sector by the year 2022. The country has a good presence of manufacturing firms, the bulk (80%) of which are operating from in Nairobi. However, other major regions and towns such as Thika, Mombasa and other coastal towns, Nakuru, Athi River, Kisumu

and other Nyanza towns, Eldoret, Nyeri and Western have a good presence of manufacturing firms.

In spite of the country seeking to boost the share that the manufacturing sector contributes to the GDP, KAM (2018) acknowledges that in Kenya, the sector is also feeling the challenge arising due to globalization. The Association indicates that Kenya has witnessed a proliferation of cheap products manufactured elsewhere which has exposed local firms to stiff competition. A good example is the textile industry which was previously doing very well but, has continued to struggle owing to 'Mitumba' imports. Other manufacturing industries in Kenya which have faced a lot of competition include the food and paper processing industries. Another factor which has contributed to the poor performance of the local manufacturing sector is attitude. KAM observes that Kenyans have the notion that local products are inferior and would rather go for imported ones which they view as more superior (KAM report, 2016).

Thus the current study sought to extend previous knowledge that connects employee empowerment with IWB. This was done by additionally assessing employee engagement as a mediator and LMX as a moderator. In so doing, the expectation was that the behaviour of innovativeness among employees is not just a function of employee empowerment but, can also be heightened by the relationship nurtured between employees' and their leaders, and the engagement endeavours made. The study potentially acts as an avenue through which managers can build on employee engagement and their exchange with employees' to boost innovative work behaviour.

1.2 Statement of the Problem

Empirical evidence has been found to support the development and operation of employee empowerment which leads to improved innovative work behaviour. Alkhodary (2016); Fernandez and Moldogaziev (2013), observed that employee empowerment as an overall approach can increase motivation to innovate, empowerment practices have divergent effects, and some may even discourage innovation work behaviour of employees.

However, there is a scarcity of knowledge on how innovation behaviour can be fostered at the employee level in the organization (Sanz-Valle, Naranjo-Valencia, Jiménez-Jiménez, & Perez-Caballero, 2011). There is still a general lack of mediators and moderators that link employee empowerment with IWB. Thus, a number of management studies focus only on the direct impact of employee empowerment on innovative work behaviour (Alkhodary, 2016; Fernandez & Moldogaziev, 2013; Uzunbacak, 2015) while scholars pay no attention to the fact that there are other factors such as employee engagement, and leader member exchange that also have a big influence on this relationship. This failure to address the effects of other factors such as those mentioned as moderators or mediators limits the potential value of the current literature. Although some recent literature has emerged to address this gap in knowledge, further information is required to close the gap in the literature (Alias, Noor, & Hassan, 2014; Sattar, Ahmad, & Hassan, 2015; Scandura & Graen, 1984).

The focus on the manufacturing sector in this study was based on the fact that it has great potential for creation of employments, driving economic growth, and building countries competitiveness through exports (Economic survey, 2018). However, there are a number of challenges facing manufacturing sector which need to be addressed. These challenges include high prices of locally manufactured products which limit

their competitiveness in the regional markets and hinder the sector's capacity utilization (Manufacturing and Industry Sector Report, 2017). Further, weak enforcement of standards and tax laws has led to dumping of sub-standard imports and counterfeit goods into the domestic market. This raises the question, could it be that manufacturing firms have not embraced the concept of employee innovative work behaviour which is evident from their low levels of competitiveness in regional and international markets.

Contextually, a number of studies in the area of Employee empowerment and innovative have been done in western context. A study by Bos-Nehles et al. (2017) explored the effect of HR practices on IWB of individuals in Dutch Manufacturing firms. This study established that an employee perception of information sharing and supportive supervision is related to IWB. De Spiegelaere et al. (2015) on the other hand carried out a study in Europe on the relationship of job insecurity, job autonomy, IWB, and mediating effect of work engagement. It established that job autonomy is directly related to IWB which indicated a strong support for mediating role of Employee IWB in the relationship between HPWS and Innovative behaviours. An empirical research on how and why high employee empowerment work systems influence firms innovation was done in Irish Manufacturing firms (Fu, Flood, Bosak, Morris, & O'Regan, 2015).

Nevertheless, there seems to be little discussion on innovation behaviour of employees in the manufacturing firms especially in the Kenyan context despite the rise of several innovation hubs across the country. Much of the focus of innovation landscape in Kenya is tilted towards the financial services, health care, and education leaving behind manufacturing firms in Kenya.

If manufacturing firms in Kenya have to continue being innovative and remaining competitive, then more knowledge ought to be gained on the potential benefits which could accrue to innovative behaviour of already empowered employees, when their levels of engagement and exchange with leaders are integrated. The purpose of the current study was therefore to establish the effect of employee empowerment, employee engagement, leader-member exchange, and innovative work behaviour among employees in manufacturing firms in Nairobi, Kenya.

1.3 Research Objectives

1.3.1 General Objective

The main objective of the study was to determine the effect of employee empowerment, employee engagement, leader-member exchange and innovative work among employees in manufacturing firms in Nairobi, Kenya.

1.3.2 Specific objectives

i. To evaluate the effect of employee empowerment on innovative work behaviour
ii. To establish the effect of employee engagement on innovative work behaviour
iii. To examine the effect of leader-member exchange on innovative work behaviour
iv. To determine the effect of employee empowerment on employee engagement
v. To examine the mediating effect of employee empowerment on innovative work behaviour through employee engagement.
vi. To evaluate the moderating effect of leader-member exchange on the relationship between employee empowerment and employee engagement

vii. To analyse the moderating effect of leader-member exchange on the relationship between employee engagement and innovative work behaviour

viii. To establish a moderated mediation effect of leader-member exchange on the relationship between employee empowerment on innovative work behaviour through employee engagement.

1.4 Research Hypothesis

H_{01}: Employee empowerment has no direct significant effect on innovative work behaviour.

H_{02}: Employee engagement has no direct significant effect on innovative work behaviour.

H_{03}: Leader-member exchange has no direct significant effect on IWB.

H_{04}: Employee empowerment has no direct significant effect on employee engagement.

H_{05}: Employee engagement has no significant mediating effect on the relationship between employee empowerment and IWB.

H_{06}: Leader-member exchange has no significant moderating effect on the relationship between employee empowerment and employee engagement.

H_{07}: Leader-member exchange has no significant moderating effect on the relationship between employee engagement and IWB

H_{08}: Leader-member exchange has no significant moderated mediation effect on the relationship between employee empowerment and IWB through employee engagement.

1.5 Significance of the Study

The study was deemed significant in a number of ways. First and foremost the study fills the gap in terms of empirically showing the potential enhancement of IWB through empowering employees and engaging them. This joint impact on employee engagement, LMX and innovative work behaviour has not been studied before. The research thus makes an important contribution to the theory and practice of innovative work behaviour. Secondly, the study findings are potential pointers as to how stakeholders in the manufacturing firms ought to optimize on employee engagement and the exchange between management and employees to encourage innovativeness.

Consequently, the findings and recommendations of this study will be of great use to the organization's C.E.Os, HR managers and other administrators in articulating initiatives that are intentional and aimed at enhancing opportunities for everyone and helping to solve some of the challenges in employee empowerment, Leader Member Exchange and innovative work behaviour.

The Kenya Association of manufacturers acknowledges that through IWB, enterprises not only contribute to job creation and the country’s economic output but, also develop a culture of competition among them which permeates through the entire nation (KAM report, 2018). Innovativeness is a practice that can be used to improve profitability, part of which is used for rebuilding and reinvestment, leading to creation of job opportunities and growth in the country’s economic prospects. Subsequently, an understanding of the IWB practices and strategies, together with the linkages and effects of employee engagement and the exchange between managers and employees, forms a framework about which the Government of Kenya can formulate policies and guidelines targeting IWB and competitive advantage. The findings of the study are

therefore potential cues for planning and implementing strategies which facilitate the practice of IWB within organizations.

The communities that surround manufacturing firms also stand to benefit from the findings of the current study. There is no doubt that increased innovative work behaviour is likely to come with an array of quality products. Moreover, the competitiveness arising from such innovation is likely to result in products which besides being of high quality are also affordable to the larger community members.

1.6 Scope of the Study

This study was conducted in manufacturing firms operating in the industrial area region of Nairobi City County. The researcher prepared a list of manufacturing firms extracted from the Kenya Association of manufacturers Directory (2018). According to the directory, twenty three (23) of the firms were located in industrial area and were therefore the focus of the study. The sample used in this study includes employees from manufacturing sector in Nairobi, Kenya. Therefore, the findings are, to some extent, generalizable to all manufacturing firms in Kenya and, perhaps, to some degree to the public sector.

The current research study focused strictly on the effect of employee empowerment, engagement, leader-member exchange and innovative work behaviour. The researcher therefore scrutinized the direct effects on IWB occasioned by manipulating employee empowerment, employee engagement and LMX, indirect effect of employee engagement and also the conditional effects realized by moderating effect of exchange between the leadership and employees.

Although there is a general agreement among scholars that self-administrated questionnaires do not produce a good level of response, the percentage of responses

received for this survey was relatively high due to the fact that firms in the manufacturing sector are becoming more interested in innovative work behaviour studies.

The study lasted for two months commencing from May 2019 and ending in June 2019. Questionnaires, mainly structured, were employed in collecting data from sampled employees drawn from the sampled manufacturing firms.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter presents literature review of study concepts, theories that support the study, followed by empirical review of literature on the relationships between objectives of the study. The chapter also gives knowledge gaps summary from empirical studies reviewed as well as the conceptual framework depicting the objectives of the study.

2.1 Concept of Employee Innovative Work Behaviour

Research on innovation has a long history of enhancing organization competitive advantage amidst the pressures of growing global competition and economic uncertainty. Kahn (2018) argue that innovation is about introduction of new things for the social settings, idea based, and intention based which is meant to offer benefits. There have been similarities but also a striking disparity in describing innovative work behaviour. Some scholars have documented evidence showing that innovativeness is an employee oriented behaviour, which seeks to bolster implementation and coordination of concepts, methods, items or procedures in the application processes, and adoption of novel ideas by individual employees or groups of employees (De Spiegelaere *et al.,* 2014; Yuan & Woodman, 2010). According to these scholars, IWB starts with idea of exploration through which, employees look for ways of improving existing work processes, services and products.

The process of idea generation involves a conceptualization of concepts surrounding emerging work processes, novel services and products, and emerging markets. In so doing previous systems can be improved. De Spiegelaere *et al.* (2014) aver that, idea

exploration and idea generation are behaviours which are often linked with the initial stage of the process of innovation.

The stage involving idea championing, is reportedly a stage in which support is solicited possibly through coalitions with like minds, on the need for new concepts. Resources can for instance be mobilized and used to push, negotiate and influence other colleagues. The implementation of the new idea can then herald new work processes, services and products which are developed, tested, and modified (De Jong & Den Hartog, 2010). Shalley, Zhou, and Oldham (2004) contend that IWB is only considered in the organization when these ideas are successfully implemented. Most early studies have revealed that IWB affect various levels of organization for example, role, group or organization, hence, De Spiegelaere *et al.* (2014) emphasize that IWB is applicable for everyone in the organization. Therefore, employee IWB is an essential tool which firms can use to pursue innovativeness and to adapt and succeed in environments which are dynamic.

Several factors have been shown to stimulate or hinder individual innovative behaviour. Among the delineated factors are leader member exchange and organizational culture and climate (Janssen & Van Yperen, 2004) social group, job characteristics, and individual differences towards innovative behaviour (Yuan & Woodman, 2010). Individual intrinsic interest and motivation towards tasks, and expected payoff are identified among psychological factors that inform behaviour directed towards innovativeness during work (Yuan & Woodman, 2010). It is argued that manipulation of the named factors through studies has, made it possible for scholars to formulate and test a number of conceptual models in an attempt to unravel factors which determine employee innovative behaviour (Yuan & Woodman, 2010).

The interest in IWB has been elucidated in studies seeking to establish how employee innovativeness impacts the public sector. Emerging empirical evidence has demonstrated that IWB faces more hurdles and barriers and, especially so in the public service domain as opposed to the private service domain (Borins, 2001; Damanpour & Schneider, 2009; Fernandez & Moldogaziev, 2013). The observed disparity in innovativeness in the public sector is often associated with the work environment in the public sector that tends to inhibit mechanisms directed towards fostering innovative behaviour in employees. For instance, unlike privately owned firms, public firms lack the pressure for competition (Verhoest, Verschuere, & Bouckaert, 2007). Managers in such firms are therefore under no pressure to stimulate and nurture innovative culture, and this lowers interest in IWB.

Inability to distinguish costs and benefits associated with innovativeness in the public sector context is also identified as a barrier to the uptake of IWB. Moreover, it is argued that lack of venture capitalists with capacity to provide funding for management of innovation in the public service sector is such that rewarding innovations in the public sector remains low keyed. Besides, the public sector unlike the private counterparts does not provide opportunities for share ownership, and maintains a fixed salary devoid of bonuses, complicating uptake for IWB more (Borins, 2000). Another barrier to IWB in the public sector is borne from the costly consequences for unsuccessful innovations. It is pointed out that public servants are at times afraid to try new innovations for fear of public humiliation by the opposition and media should such innovations fail (Borins, 2001).

De Jong and Den Hartog (2007) contend that innovativeness cannot be forced upon individuals. Consequently employees ought to willingly choose to innovate in order for the organization to maintain a continuous stream of individual innovators. Such

need to engage employees has, seen an increase in researchers keen on factors that determine innovative behaviour among employees. Despite this however, studies are often interested on factors that bolster creativity among employees leaving gaps in the need to implement ideas (De Jong & Den Hartog, 2007).

2.2 Concept of Employee Empowerment

Employee empowerment has become a common concept in the field of management in the recent past (Menon, 2001; Wall, Wood, & Leach, 2004). Management theorists have described empowerment as the degree to which decision-making, power, authority to take and execute, and get hands on resources and information for use by individuals at the lower end of the organizational structure is enhanced (Kanter, 1993).

Many scholars have stated that empowerment is an important tool that can be incorporated in the culture of a company or created by individual managers (Hunjira et al, 2011). Empowering employees can therefore be regarded as a practice intended to motivate an increase in uptake of IWB among employees, by availing requisite opportunities for individuals to participate and be involved in decision making. Essentially employee empowerment relates to the realization among managers that people working under them deserve to be given more power, autonomy, and control over their work. Managers' role should then be to provide training, resources, and coaching to give them skills and confidence to act empowered (Saif & Saleh, 2013). Jacqueline (2014) asserts that empowered employees develop motivational feelings that spur them to showcase their potential in applying skills and knowledge, and being creative when handling customer needs. The argument posited here is that through empowerment programs, employees get the freedom to interact and share responsibility with their leaders which in essence gives them authority and power.

Moreover, by interacting with their managers, employees cultivate positivism towards assigned tasks and yearn to excel in their job (Wadhwa & Verghese, 2015).

Alkhodary (2016) further postulates that through empowerment, employees gain the motivation and drive to take on routine tasks, raise levels of their production and loyalty to the organization, get more satisfied with their job, and lessen their turn-over intentions. Employee empowerment has therefore continued to gain prominence as a vital tool for achieving success in the organization. As a result of this, many scholars have shown interest in the direct effects that empowerment of employees has on among other attributes; commitment to the organization, employee satisfaction with the job, performance of employees, and innovative behaviour (Alkhodary, 2016; Meyerson & Dewettinck, 2012).

Raza, Mahmood, Owais, and Raza (2015); Wadhwa and Verghese (2015) for instance, reported that employee empowerment impacted positively and significantly on job satisfaction. It has also been empirically shown that being committed to the organization is a function of employee empowerment (Gholami, Soltanahmadi, Pashavi, & Nekouei, 2013). Moreover, Laschinger, Finegan, Shamian, and Wilk (2001) have demonstrated that an environment supportive of employee empowerment is an antecedent to the positive perception of IWB among employees, and also a precursor to improved organizational effectiveness.

The significance of empowerment is well articulated by Pare and Tremblay Paré and Tremblay (2007) in observing that, the empowerment process accords employees increased autonomy in the several responsibilities and roles they are assigned. In this way, they are able to influence processes. Empowerment is therefore an avenue through which positive work ethics and attitudes are nurtured, following a greater

degree of support. Empowerment seeks to decentralize the process of decision–making, build employees self-confidence, and give employees greater autonomy, discretion and responsibility (Sahoo, Behera, & Tripathy, 2010).

Abuzaid (2018) delineates four components through which employees in an organization can be empowered. Abuzaid identifies them as knowledge, information, power and rewards. In Kanter's (1993) view, power relates to the ability to put in motion processes that can get things done. Kanter argues that power relates to the authority, delegation and autonomy which employees are given. Kanter points out that in giving power, managers cede some traditionally held power and responsibility to employees. In this way, employees' are able to take on new responsibilities and roles, and also acquire new knowledge.

Vacharakiat (2008) posits that information relates to the relevant data which is required for the pursuance of the organization's strategy and goals. Such information should be easily accessible, and should facilitate active engagement and participation in decision making. Vacharakiat argues that empowerment leads to openness and therefore organization's that have empowered employees make information readily accessible to all, including information on the organizations IWB position. Vacharakiat (2008) adds that information is also about being explicit on roles that individual employees need to play, and communicating feedback from peers, subordinates and managers.

Nusrat (2018) recommends knowledge sharing among staff, arguing that, it exposes employees to new ideas, knowledge and information required in their work. Nusrat further points out that, employee empowerment works in tandem with research and development. Employees need to be trained on skills and knowledge in decision

making and problem solving, which would eventually enable the employee to contribute to the realization of the organization's goals.

Employee motivation no doubt gets a major boost through rewards. According to Nusrat (2018), rewards are benefits in monetary or non-monetary terms that employees receive as a form of recognition of good work done. Such rewards could be bonuses awarded in appreciation of the employees' innovativeness or a boost in company's productivity. Nusrat argues that good appreciation, trust, and recognition have the propensity to increase commitment and engagement among employees. Indeed Sok and O'Cass (2015) determined that employee empowerment is a process through which the relationship between exploitative innovation and exploratory service innovation is enhanced leading to improved service quality.

2.3 Concept of Employee Engagement

Employee engagement as a concept was advanced by Kahn (1990) through an ethnographic research conducted among summer camp workers and also among architecture staff. Previous literature has presented several definitions of employee engagement, and although each concept is unique in terms of time, meaning and area have been misinterpreted by the approach used to define employee engagement, and which is often disjointed (Brad Shuck, Rocco, & Albornoz, 2011).

Brad Shuck *et al.* (2011) use a generalist approach to characterize employee engagement into a structure comprising of behavioural, emotional and cognitive components that define individual role performance. Fleming and Asplund (2007) on their part perceive engagement among employees, as "the ability to capture your employees ' heads, hearts and souls to instil an intrinsic desire and passion for excellence". According to McEwen (2011), employee engagement relates to the

cognitive and affective attachment that exists between employees and their respective organizations, which motivates them to apply self-discretion when undertaking assigned tasks. Abraham (2012) in his definition of employee engagement alludes that employee engagement leads to optimistic attitudes and behaviours of workers that lead to improved business productivity in a way that stimulates and reinforces each other. It's about workers having pride and loyalty working for an organization and being an organization's great advocate for clients, users and consumers, going the extra mile to complete a piece of work.

Harter, Schmidt, and Keyes (2003) view employee engagement as the enthusiasm an employee shows in being involved with assigned tasks, and the satisfaction that they derive from doing it. Schaufeli, Martinez, Pinto, Salanova, and Bakker (2002) on their part regard engagement among employees as a state of mind which is directed towards work absorption, dedication and vigour. Sundaray (2011) leans more towards psychological components of emotion, cognition, and behaviour in defining employee engagement. Sundaray perceives cognitive engagement as a belief inherent in the employee with regards to the company culture, leadership and structure. On the other hand, emotional engagement is associated with employees' perceptions of the organizational workmates and management. The behavioural element on the contrary focuses on value addition manifested through employees' efforts towards assigned tasks (Lockwood, 2007).

Stanley and Mann (2014) also emphasize the state of the mind narrative by defining work engagement among employees as that state of the mind that is work related, positively fulfilling, and requiring dedication, vigour and absorption. According to Stanley and Mann, vigour is reflected in mental resilience, expenditure of high energy levels, a willingness to partake tasks and showing tolerance and persistence even in

challenging circumstances. Dedication is manifested through strong involvement in work, inspiration, pride, enthusiasm for work, taking on challenging tasks, and feeling significant when undertaking tasks. Absorption on the other hand reflects a strong attachment to tasks being undertaken, manifested in being fully concentrated and engrossed in them and being reluctant to stop performing the tasks.

Nienaber and Martins (2014a) posit that work engagement as a construct relates positively and often distinctively with related constructs which, include organizational commitment and job involvement, extra-and in-role behaviour, workaholics' and personal initiative. Christian Christian, Garza, and Slaughter (2011) argue that work engagement comes with diverse benefits that include but not limited to increased extraversion, decreased neuroticism, and decreased burn out. Moreover, it results in good physical and mental health. Using a Meta–analysis of research studies targeting engagement, Christian *et al.* (2011) demonstrated a distinction between the engagement construct with the constructs of job involvement, organizational commitment, and job satisfaction.

Schaufeli and Bakker (2004) conceptualize work engagement as antipode albeit positive, of burn out at the workplace. Burn out a syndrome which is manifested in terms of physical or mental exhaustion, decrease in professional efficacy, and cynicism. The extant literature delineates two dimensions of work engagement (Schaufeli & Bakker, 2004; Schaufeli, Martinez, *et al.*, 2002). It is argued that engagement is a function of involvement, energy and efficacy relating to opposing dimensions of burn out. The contention here is that a feeling of burn out triggers exhaustion from energy, cynicism results from involvement, and ineffectiveness becomes the product of efficacy.

Schaufeli, Martinez, et al. (2002) point to work engagement and burn out as two recognizably different states of mind which, correlate negatively rather than being viewed as two ends that lie opposite to each other on a continuum. Consequently, in their view, engagement shown by employees to their work is a state of mind with an orientation to work, and which other than being positive is also fulfilling and requires dedication, absorption and vigour (Schaufeli, Martinez, et al., 2002). Under this definition, vigour is seen as an act of willingness to take time and be devoted to work; expending a lot of energy performing tasks, while remaining resolute even when meeting challenging tasks. Dedication on the other hand is associated with a strong lineage to assigned tasks shown through a high sense of pride, enthusiasm and inspiration to take on challenging tasks. (Schaufeli, Martinez, et al., 2002) further relate absorption with a complete immersion or engrossment in assigned work often leading to reluctance to quit the work.

2.4 Concept of Leader–Member Exchange (LMX)

Leader–members exchange is recognized as a dyadic theory of leadership with inkling towards leadership studies. According to this theory, employees are influenced by the quality of the relationship existing between the management on one side, and employees' on the other. Prior discourse on LMX theory indicates that the quality of relationship that develops between employees and the management is, bound to vary in quality and as such most studies have gravitated around such variations in quality (Liden & Graen, 1980).

Analysis of the quality of relationships between management and employees' has progressed in a two faceted way. First and foremost, analysis of such relationships has been based on formal contractual relationships. Under this form of relationship, basic resources and needs of an economic nature have been exchanged between the two

parties. The second form of relationship is the informal one. Under this informal relationship, extra economic expectations such as special treatment, trust and rewards are examined (Wayne, Shore, Bommer, & Tetrick, 2002). This shows that LMX leaders differentiate the extent to which they support and hold high expectations from their employees and therefore all employees are not treated equally, (Henderson, Liden, Glibkowski, & Chaudhry, 2009). In this respect, management and employees enter into closer ties that ooze with high quality, based on unique traits and characteristics (Henderson *et al.,* 2009). Viewed also as intergroup relationship, or exchange relationships between managers and employees, they encompass understandings that surpasses expectations of formal contracts, and are manifested through emotional support, treatment accorded to employees, the beneficiaries of such treatment, emotional support, better interactions, trust and entrusted with higher responsibilities (Dulebohn *et al.,* 2012). From this kind of relationships, both parties benefit in a mutual way. Whereas managers gain in the quality of work done, employees receive higher financial benefits and access career development promotion path. Moreover, such a mutual relationship creates awareness among the management regarding the expectations, needs and problems that employees' encounter in the course of doing their work.

According to Muñoz-Doyague and Nieto (2012) such awareness allows the management to put in place mechanisms through which, to realize employees' needs and expectations and also nurture innovativeness and creativity. In return, employees' gain feedback that encourages them to maintain a pool of creative ideas when seeking to implement solutions.

2.5 Theoretical Review

The current study was grounded by four theories namely; innovative systems theory, structural theory of empowerment, theory of self-determination (SDT), and social exchange theory. Kanter's theory focuses on the structures in the organization rather than peoples own qualities. SDT focus on individual internal motivation which leads to personal growth and fulfilment. SDT explains behaviour human in which personal factors, environmental influences, and behaviour continually interact. While SET is the individuals' social behaviour that is based on minimizing cost and maximizing cost in the organization.

2.5.1 Innovative Systems Theory

The construct of innovative work behaviour which in the current study represented the dependent variable, was anchored on the innovative systems theory based on the concept of innovation advanced by Lundvall in 1985 (Schlaile *et al.*, 2017). According to this theory, a complexity of interactions and relations occur in a systemic manner comprising of enterprises and research institutes, and culminating in innovation and development. In employing the innovative systems theory, the researcher took cognition of the individual nature of organizations and individuals alike to embrace innovative work behaviour. The innovative systems approach is premised on the understanding that innovativeness and intake of technology relate both to collective efforts (achieved at the organizational level) and efforts undertaken by individual employees (Edquist, 2001).

The innovation systems theory recognizes that innovation is a process which is diverse in nature, and which involves product and process invention, as well as, leadership, technology and other closely related factors (Martinez & Lopez, 2018). Potočnik and Anderson (2016) argue that the innovations systems approach is

necessary since innovation at the work place, relates to results, products and processes which result from endeavours of developing and introducing to the market supposedly better and new ways of doing things. Anderson, Potočnik, and Zhou (2014) point out that innovation can involve the entire organization, teams of employees, individual employees, or a combination of all.

Marko Hekkert, Suurs, Negro, Kuhlmann, and Smits (2007) agree that the innovation systems approach takes into account the fact that firms in modern economies are facing a diversity of individual dynamics, technological characteristics, and adaptation techniques. Edquist (2001), as cited in Hekkert, Suurs, Negro, Smits, and Kuhlmann (2007) therefore perceive innovation systems as institutions and structures of an economic nature, which influence the rate and direction of societal change and adaptation of technology.

The systems approach as noted by Edquist (2001) is justified by the fact that innovation systems vary significantly with regards to sectors and resources spent on research and development. For instance, Fagerberg (2001) reckons that industrial production in the United States of America differs markedly with industrial production in the European Union in terms of the intensity of production of research and development. Moreover, components of the systems vary across nations and organizations. Hekkert et al., (2007) further posit that the characteristics of innovative systems are bound to change over time owing to entry of new players, new laws, and other events. Choice of the innovation systems theory for underpinning the current study was based on the premise that innovative work behaviour in manufacturing firms in Kenya ought to recognize the four categories of innovation systems which includes national, regional, local and technological systems that in one way or another interact to influence the nature and direction of innovative work behaviour in firms.

According to Chung (2002), the national innovative system defines innovativeness at the national level, and involves the flow of information and technology among enterprises, institutions and individuals as defined by the national government through appropriate policies. The researcher therefore argued that in seeking to achieve innovative work behaviour, manufacturing firms in Kenya ought to abide by the government guidelines targeting innovation.

Moreover, the researcher took into account the importance of regional innovation systems in relation to manufacturing firms in Kenya. Mghendi (2011) points out those regional innovation systems encourage rapid diffusion of best practices, knowledge and skills within a geographic area which despite being smaller than a nation is nevertheless bigger than a city. Consequently, manufacturing firms within specific regions in Kenya were viewed as being able to enter into relationships that generate a learning process which is collective, and which is capable of maximizing innovative potential across firms irrespective of the sizes of the firms.

Choice of the innovation systems theory to underpin this study was also based on the understanding that the Nairobi City's industrial area is a hub of manufacturing firms a kin to the local innovation system. According to Mghendi (2011), a local innovative system entails a spatial clustering of firms with their associated non-market institutions, which form a conglomerate aimed at creating new and novel services and products for specific lines of businesses. As a result therefore, the thinking of the researcher was that manufacturing firms in industrial area specializing in similar sectors could influence innovative behaviour across their sectors through collaborations under the local innovation systems.

The fourth facet of the innovation systems theory which was found suitable to innovative work behaviour in the context of manufacturing firms in the industrial area is the technological innovation system. Carlsson and Stankiewicz (1991, as cited in (Mghendi, 2011) perceive a technological innovation system as a dynamic network of agents, in this case, manufacturing firms which interact in a specific industrial area to generate, diffuse and employ similar technology. The argument postulated here is that the rate and direction of technological change is such that firms specializing in the same products need to examine and share knowledge regarding the various technological systems, in order to acquire innovative work behaviour.

2.5.2 Social Exchange Theory

Social exchange theory was the second theory on which the study was grounded. The social exchange theory was proposed by Thibaut and Kelly (1959) following the conclusion of their seminal work. According to Thibaut and Kelly (1959) on the one side and Blau (1964) on the other, a social exchange, is a tangible or non-tangible exchange which occurs between two or more individuals, and which is either costly or rewarding to the parties involved.

The theory was therefore advanced by George Homans, a sociologist (as cited in Redmond, 2015), and proposes social behaviour to be a product of the process of exchange. Using dyadic exchange which involved two people, Homans advanced the need for sociological constructs such as solidarity, leadership, power, authority, status, balance, and distributive justice during exchange. Homans (as cited in Redmond, 2015) postulates that social relations are anchored on potential risks and benefits that may accrue. Consequently, an excess of risks would provide room for termination of such a relationship.

The social exchange theory as viewed by Homans has had its fair share of critics who argue that his reliance on psychological constructs undervalues the significance of institutions, exchange structures, and social processes (Blau, 1964; Makoba, 1993). Blau (1964) for instance brings in the notions of utilitarianism and reinforcement. Blau argues that social exchange is, bound by utilitarianism among those involved in terms of rewards they anticipate or the reinforcement they are given basing on previous rewards given. On the flip side, Blau (1964) embraces the dyadic view by Homans in explicating the critical role groups play in social exchange. Uchara (1990) faults Blau's propositions on grouped social interaction arguing that groups operate on dyadic relationships since people within the groups are linked in dyadic ways.

Choice of the social exchange theory for the current study was informed by the knowledge that leader–member exchange is a social exchange construct requiring examining from a social exchange perspective. Moreover, choice of this theory was emboldened by previous studies which have employed it to explain relations between management and employees, and variations in the quality of such relations (Greguras & Ford, 2006; Sepdiningtyas & Santoso, 2017; Xerri, 2013). Consequently in opting for the social exchange theory, the researcher premised that leader–member exchange relations requires some amount of give and take without necessarily bringing management and employees at equal footing. Both parties weigh the worth of the exchange in terms of benefits accrued against cost incurred.

It has further been pointed out that the social exchange theory recognizes that, relationships need time to develop and are hinged on loyalty, trust, mutual commitment and a favourable environment (Cole, Schaninger Jr, & Harris, 2002). It is important to observe that in order for leader–member exchange to impact significantly

on employee innovativeness; such a relationship ought to be founded on loyalty, trust and ideal conditions.

2.5.3 Theory of Structural Empowerment

The third theory that informed this study is the theory of structural empowerment advanced by Kanter (1993), who found employee empowerment to be an attribute valuable to the organization. This theory of empowerment has become a powerful theory to express the organizational situation that can either encourage or hinder employee innovativeness in the organization. Literature has shown that the structural theory offers an approach that is theory driven which explores employees' attitudinal and behavioural outcomes as influenced by the work environment (Spence Laschinger, Wong, Grau, Read, & Pineau Stam, 2012).

Therefore, Kanter affirm that access to employee empowerment structures is a major contributor for the employees to do their work to completion. Kanter postulates that employee's interaction and access to empowerment structures are supported in the organization such that employees are able to access information, obtain resources, get support, and are exposed to opportunities. In this regard, information is about technical knowledge and the expertise needed for performing a particular job while, access to resources relates to the capability to get supplies, money, and equipment required for the organization to meet its goals. Access to support refers to the feedback and direction provided by manager and supervisors as well as the subordinates. On the other hand, scholars have shown that employee empowerment in the form of autonomy, job control, recognition, and competence is critical in nurturing positive employee attributes. Consequently, empowering employees is seen as an avenue for employee accountability, commitment, and effectiveness (Degner, 2005).

Choice of Kanter's theory for the current study was based on its wide use in the discourse on employee empowerment, having featured in professional nursing (Kluska, Laschinger, & Kerr, 2004); Medium size companies (Khan & Malik, 2017; Tastan & Davoudi, 2015); education and leadership (Deci & Ryan, 2000; Ledwell, Andrusyszyn, & Iwasiw, 2006; MacPhee, Wardrop, Campbell, & Wejr, 2011). Moreover, evidence exists on structural empowerment's impact on satisfaction among employees (Lautizi, Laschinger, & Ravazzolo, 2009; Wong Humborstad, Nerstad, & Dysvik, 2014). The theory of structural empowerment was deemed ideal for the current study since it provides a useful theoretical framework for underpinning employee empowerment which was conceptualized as the independent variable in the study. The essence was to provide a clear understanding of employee empowerment in the context of manufacturing firms.

2.5.4 Self Determination Theory

The fourth and last theory upon which the study was grounded is the self-determination theory (SDT) which emerged to examine two principal forms of motivation namely extrinsic and intrinsic. Intrinsic motivation is regarded as the internal drive that inspires people to carry out activities willingly. On the contrary, extrinsic motivation relates to the drive to behave in a certain way based on external sources which results in external rewards (Deci & Ryan, 1985). SDT therefore addresses psychological needs related to autonomy, competence, and relatedness.

Deci and Ryan (2000) postulate that an experience of autonomy, competence and relatedness is an avenue to self-determination which culminates into intrinsic motivation to pursue creativity and innovativeness among individuals. Autonomy is the freedom which comes with self-initiation and regulation of actions and tasks available. Deci and Ryan (2000) maintain that autonomy is a central tenet in

innovativeness owing to the feeling of control that it elicits in individuals. They contend that, competence relates to the acumen individuals possess, to attain internal and external outcomes, and to remain focused and effective while undertaking tasks and required actions. All these can be acquired only if mechanisms are in place through which individuals can be exposed to diverse skills to gain mastery of tasks.

Relatedness reflects a universal desire to interact and be connected and caring for others. It involves the nurturing and development of connections which are not only secure, but are also satisfying and of a mutual nature across the organization. Deci and Ryan (1985) have suggested that when individuals experience autonomy, competence, and relatedness, they acquire self-determination and are intrinsically motivated to do things that interest them.

A series of studies have shown that Social Determination Theory (SDT) has a connection to employee's engagement and human behaviours (Deci & Ryan, 1985). This theory confirms that, the level at which employees are engaged arises from the ability to control emotions and attitude. For this reason, the self-determination theorem is associated with whether an employee is engaged or disengaged. Through SDT, an employee's attitude which acts as a major driver of motivation is aligned with his or her behaviour, either at personal or at professional level. The bottom line is that organizational productivity is a function of engaged employees, while engagement among employees is itself a function of employee motivation.

2.6 Review of Empirical Literature

2.6.1 Employee Empowerment and Innovative Work Behaviour

The extant literature documents impacts of empowering employees on their innovative work behaviour. Uzunbacak (2015) for instance investigated the impacts

that employee empowerment, and their innovativeness has on organizational performance. Among the critical conclusions that Uzunbacak arrived at were that; employee empowerment which takes cognizance of structural, social psychological and behavioural components impacts innovativeness highly and in a positive way; that structural empowerment was a significant predictor of innovativeness among employees.

In another study, Alsop, Bertelsen, and Holland (2006) reported that employee empowerment was a precursor to the purposive choosing of actions suitable for individual employees and which yield desired outcomes and actions. Many previous studies have likewise documented evidence of employees being able to have self-belief and control and having to act autonomously as a result of empowerment (Ahearne, Mathieu, & Rapp, 2005; Wong Humborstad et al., 2014).

Empowerment has also been previously associated with employee efficiency, and organizational productivity in the sense that it enhances innovativeness and creativity (Kahreh, Ahmadi, & Hashemi, 2011). Other studies have captured interest in the impacts of employee empowerment on IWB, and have concluded that empowerment of employees is an avenue for attitudinal change, creativity, and collaborations designed to improve the quality of products (Bunpin III, Chapman, Blegen, & Spetz, 2016).

Alkhodary (2016) assessed the role empowerment of employees' plays in creativity directed to business, tasks and jobs among employees. The critical finding was that employee empowerment, measured in terms of impact, self-determination, competency, and meaning related positively with the behaviour of innovativeness towards work measured, in terms of sensitivity to problems, idea fluency, and

originality, in the context of interior design firms drawn from Jordan. Similarity previous studies by (Hebenstreit, 2012; Kanter, 1988) concurs with the findings of (Alkhodary, 2016; Celik, Cakici, & Celik, 2014) that, empowering employees positively and significantly predicted employees' innovative work behaviour.

Luzinski (2012) in laying the ground for Alkhodary (2016) posited that practical ideas for nurturing innovativeness require that organizations in question put into consideration supportive environments, which can bolster innovative methods and ideas. Another study argues in favour of employee empowerment by contending that career success is a function of employee empowerment (Chronister & McWhirter, 2011), and that this is realized through acquisition of a positive work ethic and attitude. In yet another study, Bos-Nehles *et al.* (2017), used a systematic review of literature to examine HRM practices that best enhances IWB. From this research it was clear that best HRM practices were training, development, rewards, feedback, task composition, demands of the job, autonomy, and job security. Likewise, Abuzaid (2018) conducted a research which showed that employee empowerment related strongly with strategic success. This study further reveals that delegation of authority, participation, and working environment impacted positively with strategic success.

Kuokkanen, Leino-Kilpi, and Katajisto (2003), turned to the nursing context in Finland to analyse the effect of perceptions of structural empowerment on self-determination among nurses. They reported that nurses perceptions of structural empowerment impacts positively on their self-determination in the Finnish context. Continuance to this line of thinking, Steinmann Steinmann, Ötting, and Maier (2016) argued that career development was indebted to empowerment. Kanter Brown and Kanter (1982) had hitherto emphasized the significance of power structures put in place within organizations and opportunities availed, in achievement of career goals

and in the overall productivity of organizations. (Brown & Kanter, 1982) noted that lack of power structures, and opportunities to access power were impediments to career development, professional identify, and sense of innovation among employees. Furthermore, (Spreitzer, 1995) argues that psychological empowerment connects the social structures of the work context with innovativeness.

Power sharing is credited with diverse perspectives of employee empowerment. According to Bowen and Lawler III (2006), sharing of power assigns employees with authority to undertake tasks, provides them a wider latitude to participate in decision making at higher levels, puts employees in a stronger position to confidently think and partner with the organization, and provides them with the impetus to be more creative and effective in emerging competitive work environments. It is argued that by sharing resources, knowledge and power among the management and employees, organizations are essentially increasing commitment and job satisfaction within the entire staff. This in turn goes a long way in cementing organizations position in terms of effectiveness, interaction quality and overall productivity (Bowen & Lawler III, 2006). Moreover, Wagner, Parker, and Christiansen (2003), observe that when power is shared among the staff, delegation and employee involvement are raised, and this instils among them a sense of competence, efficacy, self-determination, meaningfulness and intrinsic interest to pursue IWB.

Chen, Zhang, and Wang (2014), having analysed power sharing and job performance in the context of telecommunication organizations, aver that power sharing empowers employees psychologically allowing them to improve significantly in their IWB. Yuan and Woodman (2010) recognize that the level of influence and power that an employee exudes remains critical to the employee's self-belief and control of the work environment and, by extension of the capability to realize the outcomes of the

desired innovation. Indeed Damanpour and Schneider (2009) have documented the gains that power can bring into individuals innovativeness. Using the context of local governments, Damanpour *et al.,* (2009) examine 725 such governments from the US and conclude that the level of power accorded to a public manager correlates positively with efforts shown towards adoption and implementation of innovation. Damanpour and Schneider (2006) argue that being in the leadership position; business managers are in a position through which they can influence motivation among workers by among others. Creating the required social and work environment, and designing rewards systems.

Damenpour *et al.* (2009) further posit that through leader–member exchange, employees are elevated to a high level of power that enables them to access greater resources, freedom, opportunities for making decisions, and autonomy in reciprocity of high levels of commitment and loyalty. Yuan and Woodman (2010) concur that looking at new considerations involves conducting experiments to test novel ideas, handling new technologies and processes which go into product improvement. Consequently, employees require enough time, access to more resources, increased level of power that can stimulate innovativeness, and greater autonomy at work. The bottom line is that a high level of power has the propensity to spur interest in IWB, and the self-confidence needed to achieve desired outputs of innovation.

Åmo and Kolvereid (2005) agree with the power and innovation notion by contending that high levels of power come with innovative behaviour of similarly high level leading to more advanced and quality products. The positive impact of power on innovative behaviour has also been reported by several scholars who, point to power as the tool that employees require to have the freedom and room for eliciting the required innovative behaviour (Åmo & Kolvereid, 2005; Seibert, Kraimer, & Crant,

2001). Moreover, Seibert *et al.* (2002) claim that power leads to pro-activity among people which, in turn increases chances of taking on extra role behaviour a kin to innovativeness among individuals. Consequently, they argue that, employee who have power are more proactive and are readily willing to exhibit innovative behaviour.

Harjes (2010) examined how the level of power among individuals impacted on their innovative behaviour, and came into a conclusion that high levels of power correlated positively and highly with innovative behaviour elicited by the individuals. Scott and Bruce (1994) chip in with the impact of pressure noting that adopting the problem solving approach is a cognitive way to influence innovative behaviour among employees. Other scholars pointed to goal orientation (Bouwhuis, 2008), and employability (Stoffers & Van der Heijden, 2009) as characteristics possessed by individuals which positively influences innovative behaviour. Yuan and Woodman (2010) point beyond individual characteristics, noting that employee' expectations regarding desired outputs of innovation, expected risks, and potential gains are significant determinants of IWB.

Various scholars have also highlighted the impact of level of power on determining innovative behaviour among employees, particularly with regards to potential challenges, autonomy and the variety of the job (Axtell et al., 2000; Ramamoorthy et al., 2005). These scholars for instance, argue that, power positively and significantly influences innovative behaviour among individuals. Individual employees when given power, gain the latitude to try on novel ideas irrespective of their chances for success. The level of power accorded in essence allows them to adapt the trial and error approach which eventually enables them to be more efficient and effective in performing assigned ask.

Organizational information on the other hand is reportedly capable of impacting employee retention and productivity (Salin, 2003). Croshing and Ward (2001) posit that through successful evaluation of available information, employees are given the opportunity to appraise and gain a clear understanding of their expectations and those of the organizations, as well as the duties they have to perform. Managers and supervisors are at the same time able to conduct IWB reviews and verify employees effectiveness. In the event that levels of effectiveness are found wanting, expectations are re-stated and employees are given more opportunities to showcase their innovativeness and strength to achieve stated outcomes (van Vuuren, de Jong, & Seydel, 2007).

Observations have however been made to the effect that reactions taken by some organizations to rectify errors have sometimes stimulated cover up of those errors. On this basis, suggestions have been advanced indicating that management's actions particularly those directed towards safety, occasions a climate which influences the levels of freedom that employees have in terms of open and free discussion of issues pertaining to safety. For instance, communication climate ought to factor in personal and organizational needs. Evidence has shown that communication among employees is of particular importance, and often augments employees' perceived prestige while, at the same time enhancing organizational identification (Bartels, Pruyn, De Jong, & Joustra, 2007). Communication climate is therefore considered a critical factor that mediates effects arising due to organizational identity and whatever content is portrayed in the communication.

Smidts, Pruyn, and Van Riel (2001), point out that communication climate is inclusive of organizational stimulants and motivators which are meant to spur employees to focus on, and meet organizational goals. In addition, such an

environment should inspire workers to identify seamlessly with the organization. Moreover, communication climate relates also to employee attitude towards the organization. Smidts *et al.* (2001) examined the relationship between organizational climate and employee commitment on the one side, and between information climate and employee commitment on the other. Results indicated that both information climate and organizational climate had positive and significant correlations with employees' commitment to the organization. Information climate has also been found to correlate positively with both job satisfaction, and organizational commitment (Nystrom, Ramamurthy, & Wilson, 2002).

Nystrom *et al.* (2002) also delineated three climate dimensions associated with organizational climate and its impact on innovativeness. The three dimensions include external, risk and achievement orientations, which are also viewed as moderator variables in innovation studies. Zerfass and Huck (2007) identify the size of an organization and professional resources as positive and significant determinants of innovativeness. Malik (2004) on the contrary, analysed how integration of organizational and information climates related with interpersonal conflict. Among the main findings were that; integrating, compromising and obliging approaches to dealing with interpersonal conflicts positively and significantly correlate with a communication climate that is supportive; and that a communication climate that appears defensive correlates positively and significantly with domineering and avoidance approaches. Ambreen (2005) analysed how leadership styles were influenced by information climate. The study affirmed that information climate that is defensive, correlated positively and significantly with leadership style that was task oriented. Similarly, supportive information climate related positively and significantly with leadership style that was person oriented.

Nafees (2006) on the other hand assessed the effect of organizational culture on IWB. The study by Nafees revealed that there were significant differences in IWB between medium and small scale organizations. Middle scale firms had higher levels of IWB among employees than small scale firms which exhibited low levels of IWB. The implication was therefore that organizational culture was indeed a significant determinant of acquisition of IWB. Besides, acquisition of IWB was found to be gender sensitive with, women reporting higher mean scores than men. Interest has also extended to innovation and access to information. West (2002) for example, argues that information is a critical element in the promotion of the management of innovation, and plays a key role in comprehension of leadership communication as applied in contemporary society.

Gilley, Dixon, and Gilley (2008) point at leadership communication as depending on the integration of empirical evidence and theoretical concepts to get a clear understanding of innovation from an affective, cognitive and social perspective. Such integration also allows stakeholders to understand the role information plays in the innovation process coherent with communication management. Observations have also been made to the effect that, modernized private sector firms have shown moderately higher levels of IWB among managers as opposed to their public sector counterparts (Arif, Zubair, & Manzoor, 2012). Trend analysis of innovative work behaviour indicated that there were more variations in managers IWB arising from systematic, dynamic and enhanced expectations brought about by global forces.

Transformational leadership has also featured among factors that have had significant effects on IWB (Reuvers, Van Engen, Vinkenburg, & Wilson-Evered, 2008). Arif *et al.* (2012) point to workplace characteristics and individual characteristics as other antecedents of innovative work behaviours. Perception of rewards received, against

efforts expanded on the task assigned is also deemed as a critical factor in determining IWB among employees (Jansen, 2000). West and Anderson (1996) contend that there exists a positive linkage between perceived fairness in effort rewards and job demands on one side and innovative work behaviour on the other. Chang and Liu (2008) having explored job productivity vis a vis innovative behaviour and employee empowerment came to a conclusion that job productivity was a function of innovative behaviours.

Information as an empowerment tool has been found to impact on IWB in a positive and significant way (Dyer & Nobeoka, 2000). In a case study conducted in Toyota manufacturing, Dyer and Nobeoka determined that the sharing of knowledge among the employees of Toyota and suppliers was critical to nurturing network learning and enhancing employee IWB. Knowledge integration is also recognized as one of the determinants of IWB. According to Yang and Chen (2005) knowledge in an organizational context relates to the creation, transfer, maintenance and sharing of information aligned to a business context. Consequently, consistent with the resource based view, knowledge is a critical avenue through which other resources are obtained, transformed and integrated within the organizations operations (Basaglia, Caporarello, Magni, & Pennarola, 2010). In line with these arguments, Inkpen (1998) asserts that knowledge integration ought to be viewed as a formal or informal development of knowledge, aimed at cementing relationships between organizations and individual employees. The argument posited is that, through such internal relationships, management and employees are able to communicate and share new knowledge allowing them to develop a framework upon which knowledge owned by individual employees' can be transformed into organizational knowledge.

Kodama (2009) argues that in defining integration of knowledge as an avenue of improving relationships between management and employees, the model of knowledge integration builds on heterogeneous knowledge, sourced within and outside the organization, and assimilates such knowledge. Kotabe, Jiang, and Murray (2011) concur that integration of knowledge is important in organizations. However, they reckon that for knowledge integration to be effectively implemented, organizations should have the capabilities to apply the integrated knowledge in handling available resources. Becker and Zirpoli (2003) add that the capabilities required to apply knowledge are inherent in individual skills, which are therefore building blocks for competencies in organizations. Grant (1996) avers that knowledge integration is critical to organization's competitiveness, and should therefore be approached by taking cognizance of scope, efficiency and flexibility of integration.

Enberg, Lindkvist, and Tell (2010) contend that knowledge integration should not only be concerned with building relationships, but should also focus on seeking proper instruments that can be employed to handle knowledge complementarities in an efficient manner. Alavi and Tiwana (2002) had hitherto, made suggestions to the effect that integration of knowledge provides a relatively faster and low cost avenue owing to its synergistic capacity to combine specific and contrasting knowledge in the absence of communication and without transferring it. Revilla and Villena (2012) point out that owing to this synergy inherent in knowledge integration, coordination costs can be decreased, improvements in quality can be achieved, production blocks can be improved, and capabilities for better achievement of IWB can be increased.

Creativity and openness to novel ideas is reportedly a function of training and development, as well as job oriented learning aimed at empowering employees to acquire skills and knowledge that is aligned with their job description (Bysted &

Jespersen, 2014; Fernandez & Moldogaziev, 2013). The cited authors argue that through professional training and development, employees are exposed to a broad range of novel ideas which other firms use. In so doing, employees become creative and innovative when solving emerging problems. Moreover, training enhances employees' capability to diagnose and provide solutions to identified problems in an innovative way (Bysted & Jespersen, 2014).

More evidence has been document providing support for training and development. Fernandez and Moldogazier (2013) for instance, have reported empirical evidence showing existence of positive relations between acquisitions of job oriented skills and knowledge, and IWB with associated opportunities provided to acquire them. Consequently, Fernandez and Moldogazier conclude that employees who exhibit more innovativeness are accorded opportunities to seek alternative avenues to enhance knowledge and, in return improve their confidence and IWB. Similar findings pointing towards alternative knowledge sources and enhanced IWB have been documented (Bysted & Jespersen, 2014; Knol & Van Linge, 2009; Zhang & Begley, 2011).

Another factor that features in literature with regards to innovativeness among employees is interaction. Madjar (2005) posits that for individuals to be creative, they need to go through a process of interacting with colleagues instead of thinking independently. Yang and Chen (2005) concur with Madjar and add that interaction has several potential benefits. They argue that through interaction, employees are able to share experiences having developed trust and emotional reciprocity with each other. Moreover, interaction has potential to promote creation and generation of novel ideas; widen employees' scope of vision and allows employees to share technology knowledge.

Knowledge sharing is seen as a sure way of widening knowledge reserve which is required for being innovative (Zifen, 2013). Zifen argues that knowledge sharing must transcend the firm's boarders and include customers. The argument posited is that relating with customers has potential to influence innovative behaviour among employees. By communicating with customers, employees are able to learn how to handle diversity in characteristics and needs, and are able to discern trends in service development. Besides, knowledge sharing potentially promotes creativity, improves knowledge stock and more importantly, facilitates acquisition of innovative behaviour (Zifen, 2013).

Prior studies have confirmed that organizations which are desirous of innovativeness must direct their employees towards acquiring innovative behaviour, by putting in place requisite innovative practices (Amabile, Schatzel, Moneta, & Kramer, 2004). Velasco, Zamanillo, and Del Valle (2013) in concurring with Amabile *et al*. (2004) argue that such organizations which desire innovativeness must invest in an environment that motivates and nurtures innovative behaviour, and more importantly encourages knowledge sharing and commitment among the employees. Other scholars opine that a good environment is a product of human resource practices that look to maximize innovative activities through increased incentives (Rammer, Czarnitzki, & Spielkamp, 2009; Shipton, West, Dawson, Birdi, & Patterson, 2006).

Use of incentives to promote innovativeness has also been supported by other scholars. (Jiang, Wang, & Zhao, 2012) posit that employees are bound to reciprocate in terms of increased efforts, a willingness to participate in decisions and an endeavour to be creative in doing jobs; whenever they feel valued and are motivated through incentives. In this regards, Jiang, *et al.*, (2012) are supportive of organizations coming up with a rewards system which can spur innovativeness. Indeed, the link

between employee creativity and rewards system on one hand, and between rewards system and innovation on the other, has been well documented (Fan, Hong & Ruan, 2011; Jiang *et al.,* 2012; Shalley *et al.,* 2004).

The narrative of a rewards system in nurturing innovative behaviour is also advanced by other scholars. Lu and Zhang (2007) contend that employees get motivated being individually engaged on tasks and this positively influences their generation and implementation of new ideas. Similarly, external factors in the ilk of compensation tend to influence implementation of new ideas but do not encourage creativity. Lu and Zhang (2007) therefore advocate for a combination of intrinsic and extrinsic rewards in order to maximize potential for innovativeness among employees. Views by Lu and Zhang support suggestions made by Axtell *et al.* (2000) to the effect that different factors influence innovation in different ways and at different stages. In their view, Axtell and colleagues propose that reward structures should take into account recognition of employees who participate in offering suggestions of innovative ideas.

2.6.2 Employee Engagement and Innovative Work Behaviour

Employees who feel adequately engaged have been found to be more proactive in problem solving, and in making networks of partners through which, new ideas are passed on, thereby enhancing chances of innovativeness (Hakanen, Perhoniemi, & Toppinen-Tanner, 2008; Schaufeli & Bakker, 2004). Previous studies have indeed confirmed that employee engagement is a precursor to innovative behaviour and creativity among employees. They argue that through engagement, collaborators are able to amass a wide network of personnel to involve in sharing ideas for enhancing innovative behaviour (Scott & Bruce, 1994; Shalley *et al.,* 2004).

Salanova, Agut, and Peiró (2005) contend that work engagement should be looked at from two perspectives. First it should be seen as an outcome in itself and secondly, as an antecedent to innovative behaviour. Park *et al.* (2014) in concurring with Salanova et al. (2005) posit that employee engagement is an independent construct which is likely to shape employees' perception of their work and by extension, their innovativeness. Vithayaporn and Ashton (2019) analysed factors which impact on employee engagement, and how such engagement impacts organization's IWB. A quantitative approach was designed for this research with 320 samples of Thai Airways International. The findings reveal that engagement and innovation reinforce each other, especially an IWB influenced by an engaged employee, and an engaged employees were likely to behave innovatively.

2.6.3 Leader Member Exchange and Innovative Work Behaviour

The theory of leader–member exchange has emerged as an avenue for zeroing in on relations that exist between subordinates and their leaders (Gerstner & Day, 1997). According to the theory, leaders are expected to nurture differential connections with subordinates at the place of work (Graen & Cashman, 1975; Liden & Graen, 1980). In this way, differential work groups composed of low quality to high quality exchange are formed.

The bedrock for high quality connections between subordinates and their leaders are tenets such as mutual respect, obligation, and trust in conjunction with formal exchange of monetary rewards. On the contrary, low quality LMX are a product of reliance on monetary exchange taking place as a compensation to subordinates who are only considered as hired hands or simply put, employees whose rewards should only be in terms of monetary exchange (Graen & Scandura, 1987; Graen & Uhl-Bien, 1995). Indeed it has previously been demonstrated that LMX significantly impacts

IWB among employees drawn from diverse sectors of business (Yeoh & Mahmood, 2013). Other scholars have also reported similar findings.

Alsughayir (2017) for instance, tested the effect of LMX on IWB among supervisors and employees drawn from hotels in the Saudi Arabian context and confirmed that LMX positively and significantly predicted IWB. In another study, M.-S. Kim and Koo (2017a) examined how LMX helps hotels to achieve innovative behaviour and job performance. LMX model based on theory was therefore developed to examine the connections among employee engagement, quality of LMX, innovative behaviour and job performance. Results revealed that job engagement was a function of LMX. However, organizational engagement was not significantly impacted upon by innovative behaviour.

In yet another study, Martin, Guillaume, Thomas, Lee, and Epitropaki (2016) used a Meta–analysis to explore four fundamental issues emerging from the LMX theory involving the connection between the quality of LMX and performance. From the study, moderate to large size effects of LMX on performance were revealed; in addition, it was also revealed that quality of LMX had a moderately positive connection with objective performance.

The process and impact of LMX on employee job performance was also examined, and revealed that high quality LMX connections were a precursor for work environments that were more resourceful and which led to enhanced social support and developmental opportunities. However, they were devoid of increase in autonomy (Breevaart, Bakker, Demerouti, & van den Heuvel, 2015). Breevaart and colleagues further noted that environments that were more resourceful facilitated employee engagement to work, and subsequently enhanced job performance.

Furthermore, Khan and Malik (2017) examined the role played by work engagement in mediating between LMX, extra–role behaviours, and IWB's among employees in selected IT companies in banks in Pakistan. From the study, it emerged that the exchange between leaders and employees played a vital role in IT firms in the Pakistan context. On the contrary, some studies have reported non-significant connections between outcomes posted by employees and the connection between leaders and employees (Scandura & Pellegrini, 2008).

2.6.4 Employee Empowerment and Employee Engagement

In the recent past, many firms have attempted to embrace a variety of approaches towards enhanced engagement of the workforce. On the same note, scholars have explored connections between empowering employees and their engagement outcomes. Anitha (2014) and Dyani (2015) for example, affirm that engaging employees comes with a positive attitude among them, and elicits an emotional connection with assigned tasks. On the other hand, Zainol, Mohd-Hussin, and Othman (2016) argue that non engagement of employees in the workplace has propensity to lead to the collapse of companies given that, employee engagement acts as the driver required for steering organizations to success.

In the same vein, Stander and Rothmann (2010) analysed the connection that exists between employee engagement, psychological empowerment and employees' insecurity on the job among employees in the public and manufacturing sectors. The study indicated existence of significant connections between employees' job security with their psychological empowerment on one side and their work engagement on the other. Moreover, the study revealed positive impacts of job insecurity on meaning, empowerment impact and competence respectively, and also on overwork engagement. In addition, psychological empowerment through competence, self-

determination and commitment was found to predict employee engagement, measured in terms of dedication, vigour and absorption. Interest in employee empowerment and its effects on their engagement was also shown by Ugwu, Onyishi, and Rodríguez-Sánchez (2014) who investigated how the connection between engagement at work and trust, was influenced by psychological empowerment in the context of pharmaceutical firms, drawn from Nigeria. Their findings indicated that psychological empowerment was the most influential factor in employee engagement. Organizational trust emerged as the second most influential factor in this context. The implication from the study by Ugwu et al. (2014) was that high work engagement among employees of pharmaceutical firms was a function of both psychological empowerment and nurturing organizational trust among them.

Nawaz Nawaz, Hassan, Hassan, Shaukat, and Asadullah (2014) were also keen on the role employee empowerment played in nurturing employees' creative instincts. They looked at connections which exist between the HR practices of empowerment and training, and the creativity among employees as mediated by their engagement. Using manufacturing firms drawn from the Pakistan context, they revealed that employees' perceived themselves well catered for, taken care of and valued and treated as individuals who were assets to the organization, when they were exposed to relevant training and also when empowered. In reciprocity, they enhanced their levels of engagement with the firms and became more creative.

In another study on the same discourse, (Laschinger, Finegan, Shamian, & Wilk, 2004) used fresh graduate nurses drawn from the Canadian context, to examine the link between employees' commitment to an organization, their work engagement and structural empowerment. Results indicated that graduating nurses felt that they fitted more in the work life, when given access to structures that would boost work place

empowerment. In addition, their fitting on the job greatly enhanced their engagement with their work, and by extension, the commitment they showed to the organizations. Access to power and support also emboldened their fit to tasks assigned in terms of control, value, fairness, workload, community, and reward, all of which enhanced their engagement.

Organization commitment has been documented by several scholars as a function of empowerment (Gholami *et al.*, 2013; Insan, Astuti, Raharjo, & Hamid, 2013; Kun, Hai-yan, & Lin-li, 2007). Similarly, job satisfaction has also featured significantly as a function of employee empowerment (Raza *et al.*, 2015; Wadhwa & Verghese, 2015). Employee engagement has also been shown to depend on an environment that recognizes and nurtures employee empowerment at their places of work, and which ultimately makes organizations to be more effective (Laschinger, Finegan, Shamian, & Wolk, 2002).

2.6.5 Employee Empowerment, Employee Engagement and Innovative Work Behaviour

The impact of employee engagement in organizations has attracted a lot of interest from scholars. Numerous researches have been carried out, ostensibly to examine how HR practices of employee empowerment and training impact on creativity among employees, and to highlight and illuminate the role engagement of employees plays in that link (Nawaz *et al.*, 2014). Using data gathered from employees drawn from organizations dealing in electronics, fertilizers, pharmaceuticals, petroleum, chemicals, cement, pesticides, and textiles among others, Nawaz and colleagues were able to discern that the connection between the two HR practices and creativity among employees enjoyed partial mediation from empowering the employees in an appropriate way.

Numerous studies have investigated the link between employee creativity and IWB by seeing job autonomy as an antecedent to innovative behaviour among employees, often achieved by manipulating employee motivation, taking cognizance of the fact that it varies with work engagement (Shalley et al., 2004). In so doing, Shalley and others affirm that the association of employee innovation and job characteristics has potential to be mediated. The current study therefore aimed at an explicit exploration of mediation effects attributed to engaging employees in the link between employee empowerment and acquisition of IWB among them. In doing so, the study conceptualized that, employee engagement was a variable that had potential to mediate. The discourse on employee engagement has often traditionally looked at the notion as a state of the mind, which despite being work related, is also fulfilling and, is characterized by vigour, dedication, and absorption" (Bibi & Afsar, 2018; Schaufeli & Bakker, 2004).

A large body of research in the broader literature has converged on work engagement as a construct that is a persistent notion which does not remain fixated on any particular event, object, behaviour or individual (Bakker & Schanfeli, 2008; Salanova *et al.,* 2005). Work engagement is a construct that manifests itself through the dimensions of dedication, vigour and absorption (Bibi & Afsar, 2018). In this case, vigour relates to the employees state of mind exemplified in terms of high energy levels, capability to be resilient, a willingness to expend effort, and maintaining persistence when challenged. On the other hand, dedication relates to the enthusiasm and pride exuded when handling tasks manifested in the sense of significance and inspiration derived from the task assigned.

Employee engagement is fast becoming a critical facet in determining performance, longevity and success (Anderson *et al.,* 2014). Evidence from literature demonstrates

that employee performance is associated with manipulations undertaken in employee engagement (Christian *et al.*, 2011). According to Christian and colleagues, "given that engaged employees experience a high level of connectivity with their work tasks, they strive towards task related goals that are intertwined with their in-role definitions and scripts leading to high levels of task performance". Views by Christian et al. (2011) are consistent with Mohammad (2014), who in examining the impact of empowerment and training of employees on their creativity under the mediation of employees engagement, and having used firms dealing in pharmaceuticals, electronics, chemicals, pesticides, fertilizer, petroleum, textile and cement drawn from Pakistan Vouch for employee engagement.

Several other scholars have corroborated the findings showing positive consequences of employee engagement both at organization and individual levels. In light of reported results, Harter *et al.* (2003) conducted a Meta-analysis which reported substantial link between business outcomes of productivity, turnover and profit with employee engagement. Karatepe (2013) on the other hand used the hotel context to highlight the positive effects of engaging employees on their job performance and the willingness to elicit extra role behaviour. Karatepe argued that employees are more focused and vigilant when undertaking the assigned tasks and are more sensitive to customer needs and service when they feel adequately engaged. As a consequence, the hotel under question is able to offer quality service. In another study reinforcing the notion of employee engagement, Bakker and Bal (2010) used teachers to test a model that brought together the constructs of engagement, job resources and performance. Critical in their findings was that classroom performance among teachers was enhanced by work engagement captured via professional documents. Li, Sanders, and Frenkel (2012) also reported that through engagement, employees were

likely to exhibit high energy levels, show mental resilience and be willing to undertake challenging tasks aimed at guaranteeing higher performance.

Indirect links involving engagement have also been explored. Salanova *et al.* (2005) for instance used the hotel and restaurant context to examine the linkage between employee engagement and performance under the mediation of the service climate. The study indicated existence of a strong indirect linkage. Bakker and Demerouti (2008) corroborated the findings by Salanova *et al.* (2005) in showing that engaging employees gave them the drive to succeed and ended up resulting in improved performance among them.

Some scholars have turned their attention to seeking effects of work engagement in mediating connections between employee performance and use of HR practices. Teclemichael Tessema and Soeters (2006) for instance, examined impacts which HRM practices have on the performance among employees, and how HR outcomes such as competence and motivation mediated their connection. Considering engagement as a motivational construct, Teclemichael *et al.* (2006) established that HR outcomes were significant mediators of the connection between recruitment and training. In essence, such findings were found relevant for the current study. Besides, the findings were consistent with quantitative review findings by Christian *et al.* (2011) which found work engagement to have mediated the link between job performance and resources used in the job. In support of the views showing that work engagement mediates in various linkages, Karatepe (2013) employed hotel employees drawn from the Romanian context to confirm that work engagement fully mediated the association between; practices aimed at high performance and, job performance in an environment that supports extra role service to customers. The argument posited by Karatepe is that through work engagement, HRM practices are

enabled to induce a sense of reciprocity where employees feel bound to the organization and Yearn to pay back in terms of improved job performance. Consequently, Karatepe builds on the tenets of the theory of social exchange which postulates that employees who gain in some economic way tend to feel an obligation to reciprocate by being engaged at work and ensuring improved performance.

In recognition of these benefits of employee engagement, and noting that Karatepe (2013) focuses more on the link between work practices oriented to high performance and employee performance, the current study sought to employ ability enhancing practices such as selection and development. Use of such ability–enhancing practices took cognition of Karatepe's acknowledgement that practices of high performance are not a preserve of empowerment, training and rewards. The assumption made then was that ability enhancing practices would elicit similar results such as those connected to high performance practices.

Bakker (2009) contributing to the discourse on engagement and innovative behaviour replicates a study by Langelaan, Bakker, Van Doornen, and Schaufeli (2006) in examining linkages between engagement and temperament, and work engagement and extraversion on one hand, and neuroticism on the other. The findings indicated that when workers were engaged, they exhibited high extraversion, low neuroticism and were quite mobile. The implication being that employees who feel highly engaged are bound to respond positively to variability in environmental demands. They are flexible enough to switch between activities and adapt quickly to new expectations.

It is further pointed out that increased need to have employees be connected with their work is the genesis of innovativeness and creativity (IPMAHR, 2010). On this basis,

Sundaray (2011) argues that employees ought to have high levels of flexibility and willingness, in addition to being creative and innovative when undertaking on extra tasks. According to Sundaray, employee engagement is the avenue through which talented people can be retained, knowing clearly that they remain a source of distinct competencies that are inimitable. Moreover, engaged employees by virtue of their enthusiasm for work are bound to remain immersed in the tasks assigned for longer periods. In this way, organizations gain in form of improved ways and diversity in doing things, and having a wider pool of innovative and creative people to pick from.

The social exchange theory (SET) is recognized as a framework upon which to underpin employee engagement as a mediator in the link between employees' training, empowerment and creativity in performance (Takeuchi, Lepak, Wang, & Takeuchi, 2007). It is argued that through SET, empowerment and training are acquired through social exchanges and this goes on to elicit engaged behaviour among employees (Cropanzano & Mitchell, 2005). Martinez *et al.* (2002) build on their definition of engagement as a state of mind with an orientation to work and manifested through dedication, vigour and absorption, to argue that engagement is likely to occasion a dedication of cognitive, emotional and physical resources within employees to roles assigned and also to put more energy levels and enthusiasm and immersion to the work assigned. Karatepe (2013) affirms that employee engagement indeed mediates in the linkage between employee performance and practices employed to ascertain high performance on work.

The current study took cognizance of the findings from previous studies which fail to highlight factors in employee engagement that are central to its mediation capability, and sought to exploit this gap. Despite the many studies focusing on engagement among employees (Alimo-Metcalfe, Alban-Metcalfe, Bradley, Mariathasan, &

Samele, 2008), little effort is given to the direct connection between employee engagement, employee empowerment and IWB. A majority of studies focusing on engagement have only been keen on internal and external factors leading to successful lineage towards employee engagement.

Unsworth, Clegg, and Stream (2004) for instance, inductively deduced factors which affect engagement during the process of innovation. The results indicated that employee autonomy, meaning and self-determination were three factors which were interdependent and which interacted to influence engagement among employees. Clearly, then managers desiring to increase IWB had a lot to benefit from these findings. Employee creativity and innovativeness have received scanty interest from previous studies (McEwen, 2011). The present study sought to bridge this gap by examining the interaction between employee empowerment and IWB, by manipulation of the constructs of employee engagement and LMX among employees.

The emerging business environment in which Innovative Work Behaviour is the driver has made it imperative that if organizations have to survive and succeed, they must rethink their sustainable strategies. It is therefore noted that, organizations must look towards innovation order to succeed (Bakker, 2008). Suffice it to say therefore that, the current study aimed at exploiting innovative behaviour inherent in employees' by proposing a model which would maximize innovation and conducive atmosphere for engaging employees more. Previous results have empirically shown that maximization of employee engagement is a move towards nurturing innovative employees who can bring in new ideas in their work (Bakker & Bal, 2010).

Employee engagement is recognized as an employee outcome, and also as a factor that influences behavioural outcomes among employees. Researchers have therefore

explored employee engagement from a wide perspective and have documented its positive effects on organisation outcome (Salanova *et al.,* 2005); learning and proactivity among employees (Sonnentag, 2003); and citizenship behaviour that is oriented to the organization (Saks & Gruman, 2011).

2.6.6 Employee Empowerment, Leader-Member Exchange, and Innovative Work Behaviour

It has been documented that leadership influences IWB among subordinates. It is argued that leaders are at an advantaged position to give their subordinates support, empower them, impart supervision skills, stimulate them intellectually, share with them expertly acquired information and knowledge, and provide them with opportunities to participate in decision making (Jong Jeroen & Hartog Deanne, 2007; Krause, 2004). Consequently, leaders are seen as a source of support among subordinates. Previous studies have shown correlations between LMX and IWB. Oldham and Cummings (1996) for instance, point out that supervisor support has a positive and direct influence on innovative behaviour where upon, higher perceived levels of supervisor support attract high innovativeness among subordinates. Moreover, Jarissen and Van Yperen (2004) have also reported a higher innovative performance as occasioned by higher relationship quality of LMX.

The quality of LMX has been shown in the extant literature to be a function of factors such as social interaction, organizational commitment, job satisfaction, citizenship behaviour, and role clarity with which it is positively related; and turn over intent, role ambiguity, and role conflict with which it is negatively related (Bauer & Green, 1996; Mayfield & Mayfield, 2009). It is argued through the theory of social exchange that employee and leader interactions are responsible for variability in influences of LMX quality on the outcomes anticipated among individuals (Greguras & Ford, 2006; M. J.

Xerri & Brunetto, 2013). Besides, research has confirmed that LMX impacts positively on creativity and innovativeness among employees (Amabile *et al.*, 2004). Using the componential theory of creativity, Amabile and colleagues posit that leaders have the capacity to impact creativity and innovativeness among their followers. Shalley *et al*. (2004) through a study that investigated the connection between creativity among the employees and LMX quality corroborated the findings showing a direct relationship between the two.

Atwater Atwater and Carmeli (2009) also provide support to positive impacts of LMX on innovativeness. According to them, LMX relates positively with IWB. Consequently high quality LMX was the boon for increased innovativeness and creativity among employees. Rüschoff (2008) on the other hand establishes that LMX has the potential to mediate the link between employees IWB and transformational leadership. In view of the many studies advocating for LMX quality and innovative behaviour, the current study constructed a model that pre-supposed that the quality of LMX had a direct connection with IWB.

Leadership emerges in the extant literature as a critical driver to employee engagement. Evidence has shown that charismatic leadership (Babcock-Roberson & Strickland, 2010); transformational leadership (Tims, Bakker, & Xanthopoulou, 2011); and authentic leadership (Walumbwa, Wang, Wang, Schaubroeck, & Avolio, 2010) are antecedents to engagement among employees. Despite scarcity of evidence documenting moderating capabilities of LMX in the linkages between employee engagement and employee empowerment, evidence does exist showing that direct connections between OCB and fairness empowerment are moderated by the mode of leadership (Johnson, Truxillo, Erdogan, Bauer, & Hammer, 2009) as well as between empowerment and turnover intent via OCB. The current study was therefore grounded

upon such studies and acknowledges the role supervision plays in activating or energizing employees' passion and commitment to the organization which eventually translates into the urge to be more creative and innovative.

Relationships that invest in leader-member exchange have been noted to be rich in trust between managers and individual employees, and in a way encourage acceptance of initiatives brought forth by the management (Furst & Cable, 2008). In such relationships, employees channel their energies into being more creative. The bottom line is that LMX is able to complement the role that employee engagement plays mediating the link between employee empowerment and IWB. The assumption made is that even though employee engagement has the potential to mediate the connection between empowerment and IWB, other contextual factors may impede this connection. However, bringing in LMX may moderate the connection by removing these impediments. The current study therefore sought to add to existing knowledge by postulating that LMX has potential to moderate the employee engagement mediated linkage between IWB and employee empowerment.

2.7 Demographics and Innovative work behaviour

This study utilized gender, education, age and experience as control variables. Teruel and Segarra (2017) affirmed that gender diversity has a statistically and positive effect on the likelihood of producing non-technological advances and product innovations for larger businesses. Age is another crucial demographic factor that has been shown to play an important role in consumer behaviour (Lian et al., 2020). It is generally argued that younger individuals tend to be more adventurous and enterprising than older individuals (Hwang, Lee, & Kim, 2019). In addition, with technical devices, younger people are relatively good, so they are more likely to support the use of emerging technologies.

In a study exploring how training needs assessment affects employee commitment in the context of public universities in Kenya, Muma, Iravo, and Omondi (2014) first explored the demographic profile of employees in JKUAT and determined that a majority (51%) were females distributed in various levels of University management. Males in the sample were 49%. Age wise, Muma *et al*., (2014) gathered that most workers (41%) were in the age bracket 40-49 years; 32% were in the bracket 30-39, 9% in the bracket 20-29; and 19% were above 50 years old. This indicated that workers in JKUAT were mainly in middle age. Experience wise, 44% of the workers had been in the institution for over 10 years; 30% had served for less than 5 years; while 26% had been in the institution for 5-10 years. The essence of such findings was that having been in the institution for long staff drawn from the institution had the necessary information.

A study by Sitienei (2015) captured age, gender and tenure control variables. It was deduced that the demographic of the respondents showed that the majority of female, 112(60.21%) and many employees were in the age bracket 31 to 50 years. The assumption is that employees in this age bracket are more settled in their careers and desire to be more committed to their jobs. It was further revealed that most of the respondents (44%) had worked for between 6 to 10 years, or below 5 years (33%). This is an indicator that there is high employee retention and commitment in the department.

Further, Turinawe (2011) analyzed the gender and age of the respondents. It was revealed that out of the total male count of 92, 40 were from Makerere university business school representing 43.5% of the total and 52 were from Kyambogo University representing 56.5% of the total. Out of the total female count of 83, 37

were from Makerere university business school representing 44.6% of the total and 46 were from Kyambogo University representing 55.4% of the total. The comparison of the numbers showed that male respondents were more than their female counterparts. The research also noted that both institutions had more men employees in both categories of the respondents than women. Subsequently, it was revealed that a large proportion of the respondents were in the age group of 30-39 years. However, in the case of age group 20-29 years, Makerere university business school had more respondents than Kyambogo University. For respondents aged 60 years and above, the two institutions had the same number.

2.8 Knowledge Gaps

Existing literature reveals that employee empowerment has a significant influence on IWB. Arising from literature review, evidence linking employee empowerment to IWB is limited. A few studies that have been done focus on the direct relationship between employee empowerment and IWB have been directed to Hospital settings and Hospitality industries. The conclusion that can be drawn from this empirical literature and theory is that the existing framework for analysing the IWB is inadequate and fails to explain how employee empowerment, employee engagement and LMX enhance the innovative behaviour in the organization.

Based on the literature reviewed, the main focus of the studies is identified and knowledge gaps highlighted which informed the current study. The study attempted to address these gaps with a view to making a contribution to the employee empowerment on IWB. A summary of previous studies and knowledge gaps is presented in Table 2.1.

Table 2.1: Knowledge gaps

Author	Topic	Methodology	Findings	Knowledge gaps	Current study
Alkhodary (2016)	Relationships between employee empowerment and innovative work behaviour	Data was gathered from interior design companies from Jordan using a questionnaire. Data analysis was done use both descript and multiple regression analysis	Data revealed a positive significance on the relationship between employee empowerment and Innovative work behaviour	A positive and significant correlation was found between the variables (predictor and outcome variables).	-A direct linear relations were found with no moderating or mediating variable between them, hence the inclusion of the moderator and mediator. -The study was also carried out in Jordan, and in the interior design industry, while the current study was carried out in Kenyan manufacturing firms.
De Spiegelaere *et al*. (2014)	The relationship between job Insecurity, job Autonomy, Innovative Work Behaviour and the Mediating Effect of Work Engagement	Data was collected using face-to-face standardized questionnaire from Flemish workers from five different industries	The study revealed that job insecurity and autonomy are both directly and indirectly, through work engagement in relation to IWB	The study used two main drivers of IWB: job insecurity and job autonomy	The analysis of this study takes into account the effect of three main drivers of innovative work behaviour; employee empowerment, engagement and LMX
(M.-S. Kim & Koo, 2017b)	Linking LMX, engagement, innovative behaviour, and job performance in hotel employees.	Survey of hotel employees in South Korea. Used SEM analysis.	LMX significantly influenced job engagement and innovative behaviour but did not significantly affect organization engagement.	The study used multiple mediators on the relationship between LMX and innovative behaviour on job performance	-The study considered LMX as a moderator and employee engagement as mediator. -Employee empowerment was used as a predictor variable
Bos-Nehles *et al*. (2017)	HRM and Innovative work behaviour	Systematic review of 27 review journals	The best HRM practices for enhancing IWB are training and development, reward, job security, autonomy, task composition, job demand, and feedback.	The study examined how HRM practices affect IWB	The study examined the effect of employee empowerment and IWB. Employee engagement as a mediator and LMX as a moderator
Alsughayir (2017)	The effect of leader-member exchange on innovative work behaviour in the Saudi hospitality.	Employees/supervisors of 52 hotels using convenience sampling	LMX was found to be an important antecedent of innovative work behaviour	Further studies could test and confirm the mediating role that work engagement plays in the LMX–IWB relationship	The study examined mediating role of employee engagement

Albrecht and Andreetta (2011)	The influence of empowering leadership, empowerment and engagement on affective commitment and turnover intentions in community health service workers Test	Data collected from 139 employees of a community health service. Confirmatory factor analysis (CFA) and structural equations modelling (SEM) were used to test the measurement and structural models proposed.	Engagement was shown to partially mediate the influence of empowerment on affective commitment, which in turn influenced turnover intentions	Data did not look at other factors that influence engagement	The study considered; power, information, knowledge and rewards as factors that influence engagement.
Agarwal, Datta, Blake-Beard, and Bhargava (2012)	Linking LMX, innovative work behaviour and turnover intentions The mediating role of work engagement	Survey of 979 Indian managerial employees working in six service sector organisations in India.	Quality of exchanges between employees and their immediate supervisors influences engagement. Work engagement correlates positively with innovative work behaviour and negatively with intention to quit. Work engagement mediates the relationship between LMX and innovative work behaviour, and partially mediates intention to quit.	data was collected from service organisations and cannot be sure of generalisabilty of results	This research was conducted in manufacturing firms
Manh-Cuong Vu(2017)	Linking Ethical Leadership to Employee Voice Behaviour: The Role of Leader-Member Exchange	465 employees of service companies located in Vietnam.	Findings of the study revealed that ethical leadership promoted employee voice behaviour mediated through leader-member exchanges.	Leader member exchange mediated the relationship between ethical leadership and employee voice	LMX was used as a moderator on the relationship between employee empowerment and engagement; engagement and IWB
Uzunbacak (2015)	The impacts of employee empowerment on innovation: a survey on isparta and burdur organized industrial zones	444 employees using questionnaires in Isparta	Psychological, and social and structural empowerment have high positive impact on innovativeness, structural empowerment has an impact of high degree on innovativeness.	examining the relationship between empowerment and innovativeness which are significant concepts for organizations, how empowerment efforts affect innovativeness, and how behavioural, psychological, and social and structural dimensions of empowerment affects innovativeness.	Extensive study conducted to determine how empowerment efforts by managers are perceived by employees

Kosar and Naqvi (2016)	Determine the association between psychological empowerment and two behavioural outcomes of employee (i.e. organizational citizenship behaviour and knowledge sharing behaviour) by examining the mediating role of employee engagement and the moderating role of leader-member exchange.	156 responses using a questionnaire	Psychological empowerment positively influences organizational citizenship behaviour and knowledge sharing behaviour. In addition, employee engagement partially mediates the relationship between psychological empowerment and organizational citizenship behaviour and fully mediates between psychological empowerment and knowledge sharing behaviour. Psychological empowerment has a positive significant relationship with the employee engagement whereas leader-member exchange does not moderate the relationship between psychological empowerment and employee engagement.	The sample size was small Researchers tested only mediation and moderation	The study tested mediated moderation model in different in manufacturing firms in Kenya
Tastan and Davoudi (2015),	An Examination of the Relationship between Leader-Member Exchange and Innovative Work Behaviour with the Moderating Role of Trust in Leader: A Study in the Turkish Context	Sample of 327 non-supervisory employees that represented corporations and medium size companies from different sectors operated in Turkey.	The analysis indicated that LMX quality had positive influence on trust in leader, but the influence of LMX was not significant on employees' IWB.	Leader member exchange was tested as a direct predictor of Innovative work behaviour	Leader Member exchange was use in the current study as a moderator
Garg & Dhar (2017)	Employee service innovative behaviour The roles of leader-member exchange (LMX), work engagement, and job autonomy	convenience sampling 294 and self-administered questionnaire obtained from professionals employed in Indian public sector banks	Findings reveal that leader-member exchange (LMX) shares a positive relationship with employee service innovative behaviour via work engagement. Results also indicate that job autonomy as moderator strengthened the relationship between LMX and employee service innovative behaviour mediated by work engagement	study examines the service innovative behaviour of employees in the banking industry	Current study examines innovative behaviour in manufacturing firms in Kenya
Dahou & Hacini (2018).	Successful Employee Empowerment: Major Determinants in the Jordanian Context	Questionnaire method, data was collected from Jordanian commercial banks.	The results of a multiple linear regression analysis revealed that sharing information, job design, transformational leadership and decision making authority have a positive effect on employee empowerment Findings also support the idea that to empower employees, the organization has to give them access to information, making them knowledgeable	Data was analysed using a small sample of 113	470 sample were used in the current study

			about all what happens inside.		
Fernandez & Moldogaziev (2012)	Using Employee Empowerment to Encourage Innovative Behaviour in the Public Sector, frontline employees in the U.S. federal government.	The data for the analysis are derived from the 2006 Federal Human Capital Survey (FHCS) conducted by the U.S.	The empirical results show that while employee empowerment as an overall approach can increase encouragement to innovate, empowerment practices have divergent effects, and some may even discourage innovation.	self-reported data from a single survey raises the spectre of common method bias	Study carried out from different sectors in Manufacturing firms in Kenya
Sanders, *et al* (2010)	How to Support Innovative Behaviour? The Role of LMX and Satisfaction with HR Practices Karin	Using data from a Dutch and German survey in four technical organizations (n=272)	LMX and satisfaction with HR practices were positively related to innovative behaviour No significant interaction effects between LMX and satisfaction with HR practices on innovative behaviour were found	They focused on LMX satisfaction on HR practices on IWB	This study focused on LMX as a moderator and employee engagement and mediator

2.9 Conceptual Framework

The conceptual framework was used to provide the foundation on which the research is to be based (U Sekaran, 2003). The conceptual framework presented in figure 2.1 shows the relationship between four study variables namely; employee empowerment (independent variable), employee engagement (mediator) Leader Member Exchange (moderator) and Innovative Work Behaviour (dependent variable). Furthermore, it elucidates how the problem under study generates testable hypotheses. Employee empowerment was defined by four elements: power, information, knowledge, and rewards in manufacturing firms in Kenya.

The conceptual framework in this was informed by literature review and aimed to touch upon every aspect related to IWB and to be as comprehensive as possible. It forms a grounding upon which further development can be based.

The model proposed that employee empowerment, employee engagement and LMX influence Innovative work behaviour. The model further proposed that employee engagement mediates the relationship between employee empowerment and IWB. Another linkage suggested was the moderating effect of LMX in the relationship between employee empowerment and employee engagement and IWB. Finally the model sought to investigate the moderation effect of LMX on the indirect effect of employee engagement on the relationship between employee empowerment and IWB.

Independent Variable **Moderating Variable** **Dependent Variable**

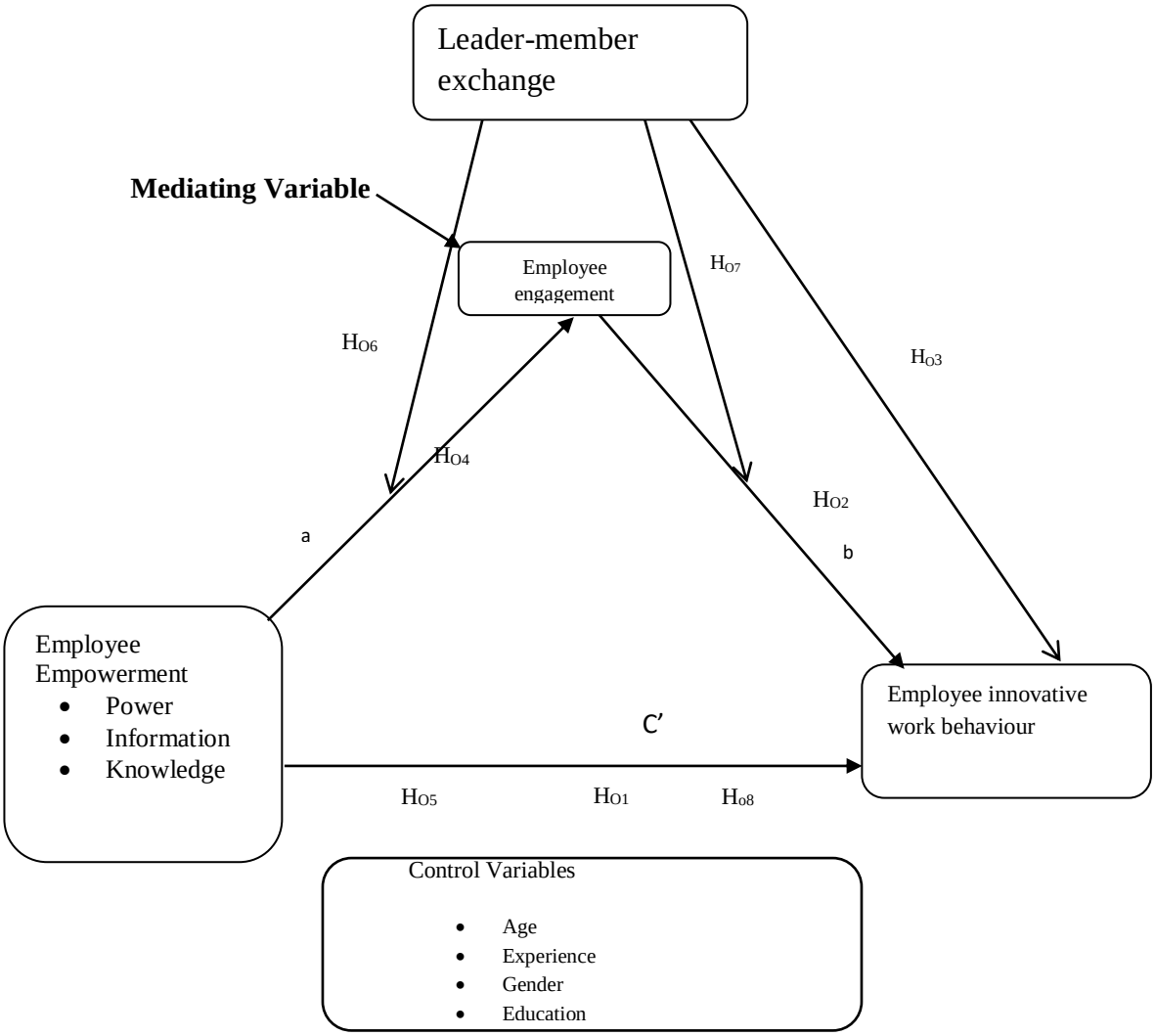


Figure 2.1: Conceptual Framework

Adopted: Hayes and Preacher (2014), model 58

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

Chapter three presents a description of the design and methodology employed in the study. It looks at the preferred research assumption, the target population and sampling procedures and data collection instruments. Moreover, it presents the validity and reliability justification for the data collection instruments, measurements of the study variables, data processing procedures, model specification, and regression assumptions. The chapter also presents the strategy and techniques used in testing the formulated hypotheses as well as highlighting ethical considerations taken care of in the study.

3.1 Research Philosophy

The underlying philosophy that guided the choice of a research design for the proposed study was positivism. Neuman (2012) asserts that positivists assume that objective truth exists and advocate for organized methods for handling probabilistic causal laws used to predict patterns in human activity in an empirical way. It is argued that prior to making decisions on suitable designs for a study, the ideal research philosophy should first be chosen. Creswell and Creswell (2017) identifies three distinct philosophical paradigms that differ in their assumptions of knowledge. The three paradigms are: positivism which assumes existence of objective truth; interpretivism which assumes that knowledge is socially constructed; and pragmatism which posits that actions and consequences inform knowledge.

Choice of the positivism philosophy for the proposed study is informed by the understanding that mediated moderated studies such as the proposed study involves

making conjectures that require empirical testing (De Vos, Strydom, Fouché, & Delport, 2005). The postulated relationships in the study were therefore subjected to empirical examination with a view to accepting or rejecting them. Besides the need for objectivity, the researcher is of the view that positivism was to put an emphasis on methodology that would allow for quantification and replication of findings as suggested by (Gratton & Jones, 2014).

3.2 Research Design

The current study employed the explanatory design (Saunders & Lewis, 2009). Creswell and Creswell (2017) define a research design as a plan, usually associated with a specific philosophical assumption, and which outlines methods for data collection and analysis. Mbizi, Hove, Thondhlana, and Kakava (2013) aver that a research design gives the structure which the study should follow. Use of the explanatory approach was therefore based on the positivist nature of the study. Typically, the explanatory design is quantitative and promotes the testing of postulations made with regard to variables' relationships (Zohrabi, 2013). The choice of the explanatory research design was informed the cause–effect relationships underlying the linkage between the employee empowerment and innovative work behaviour among employees on the other hand through the engagement of employees who were empowered and also exchange involving leaders and members on one side. The researcher therefore hoped that the design has the ability to establish and reveal the extent, and nature of cause–effect relationship by testing the postulated hypothesis. Consequently, the design was suitable for the purposes of the proposed study which was in the realm of cause – effect studies.

3.3 Study Area

The study was conducted in manufacturing firms drawn from industrial area in Nairobi City County. According to Achebe from facts and life hacks, Nairobi's industrial area was mooted way back in the 19th century and later re-planned in 1984 to the now famous industrial area, Nairobi. The area hosts the largest number of industries in the country, which include some of the renowned companies. The area is largely surrounded by low-income residential areas such as Kaloleni, Makongeni, Ofafa Jericho and Lunga Lunga. Residents from these estates form the bulk of the labour force utilized in industries in the area (Ikiara, Olewe-Nyunya, & Odhiambo, 2004). See the Nairobi's industrial area map (Appendix VI).

Choice of manufacturing firms for the proposed study was informed by the understanding that the competition among these firms, provide an environment that supports innovation among employees, and as a result, they possess the desired study characteristics. The decision to focus on industrial area was based on availability and accessibility of an array of manufacturing firms specializing in products that cut across diverse sectors. KAM (2018) identifies twenty three industries that include; Silpack majoring in packaging products; Kartasi majoring in stationery products and merchandize; Osho mainly dealing in agro-chemicals; Manji which specializes in confectioneries; Crown Paints that deals in paint; DPL Festive Limited majoring in bread baking; King Plastics which specializes in plastic products; Abcos that provides engineering services and lighting solutions; and Twiga chemicals that produces a variety of consumer products such as crop protection products, animal health products, and explosives among others.

3.4 Target Population

The study targeted all employees from accessible population from manufacturing firms in Nairobi City County. According to Uma Sekaran and Bougie (2016), target population refers to all the members of a given group to which the investigation is related. Sekaran further identifies the accessible population as those elements in the target population within the reach of the researcher. Considering that there are so many manufacturing firms in Nairobi City County, some which may not easily be accessed, the study focused on an accessible population drawn from manufacturing firms in industrial area. Manufacturing firms were chosen because they were likely to bring out the interaction between employee empowerment and innovative work behaviour, under the mediation of employee engagement and the moderation of leader member exchange. Besides, the diverse range of manufacturing firms provides a heterogeneous population from which generalization can be made. A report from Kenya Association of manufacturing firms (KAM, 2018) revealed that there are 23 active manufacturing firms in the area, with a total of 9915 employees as shown in table 3.1. The accessible population was 9915 Employees.

The current study focused on firms majoring in manufacturing, which are operating under the umbrella of the Kenya Association of Manufacturers. Manufacturing firms registered under KAM fall into two categories according to whether they process and add value, or offer essential services. From a total of 14 members, 12 are drawn from the processing and value–addition category while, 2 are from the essential services category (KAM, 2019).

Table 3.1: Study Population

Manufacturing Sector	Name of Manufacturing firms	Target Population
Chemical & Allied sector	Osho Chemicals Ltd	576
	Desbro Kenya Ltd	240
	Crown Paints Kenya Ltd	500
	Twiga Chemicals	280
	Synresins	190
	Chemigas Kenya Ltd	240
Food & Beverage	Manji Food Industries	500
	Nestle Kenya Ltd	690
	DPL Festive Limited	740
Motor Vehicle & Accessories	Pipe Manufacturers Ltd	340
Paper & Board Sector	Izusu Kenya	540
	Kartasi Industries Ltd	320
	East African Packaging industries	640
	Techpak Industries Ltd	340
Pharmaceutical & Medical Equipment	Beta Healthcare International Ltd	140
	Cosmos pharmaceutical Ltd	190
Plastic & Rubber	Silpack Industries Ltd	340
	King plastics Industries Ltd	894
	Super Manufacturers	340
	Abcos Industrial Company Limited	240
	Paras Industries Limited	390
Textile & Apparel	Alliance Garment Industries Kenya	940
	Supra textiles	305
Total		**9915**

Source: KAM (2018)

3.5 Sampling Frame

In order to adopt any sampling procedure, it is noted that a list establishing each sampling unit by number is important and ought to be made (Sekaran & Bougie, 2016). The study targeted employees from manufacturing firms within industrial area Nairobi. The list of employees in each of the identified firms was compiled in liaison with human resource departments of the respective industries, and served as the sampling frame on whose basis sampling was done.

3.6 Sample Size and Sampling Techniques

3.6.1 Sample Size

Sekaran and Bougie (2016) points out that it may not be practical for a researcher to collect data from the whole population due to limitation of time and cost. The researcher used sampling techniques which enabled collection of representative data in the given time and cost. According to Babbie (2015), a sample size represents the actual respondents the researcher intends to interview. Taherdoost (2016) states that when selecting a sample size, a researcher has to ensure that the right procedures are followed in order to get suitable number of respondents.

The sample size for this study was 470 employees from 23 manufacturing firms based in Industrial Area, Nairobi County. The study adopted Yamane (1973) simplified formula to calculate sample size for this study as shown in the equation below:

$$n = \frac{N}{1+N(e)^2}$$

$$n = \frac{9915}{1+9915\,(0.045)^2} \qquad \text{n=470}$$

Where:

N: Target Population

n: Sample size

e: Level of precision

3.6.2 Sampling Technique

A sampling technique relates to the approach a researcher employs to select the required sample for participation in a study. According to (Rubin & Babbie, 2009) a sampling method relates to the process followed in coming up with individuals capable of providing the required information to facilitate research into the issue at

hand. In essence, sampling facilitates identification of an easily manageable sample, and which is likely to provide the required information.

This study employed a mix of stratified and systematic sampling techniques. According to Shui *et al.* (2009) stratified sampling involved division of the population into a number of strata; from which samples were drawn proportionate with respective stratum numbers. Stratified sampling proceeded in two stages, with the first stage stratifying the identified firms into respective sectors, for purposes of establishing the exact number of employees to be drawn from the respective sectors as illustrated in Table 3.2. In the second stage, employees in each sector were stratified into respective firms within the sector (Table 3.3). Finally, systematic sampling was adopted to ensure that each member had equal probability of inclusion in the sample (Uma Sekaran & Bougie, 2016). Under systematic sampling, selection of the first unit was done randomly, while selection of all other units was done by picking the i^{th} observation, where i was determined by dividing the population by the required sample size. Systematic sampling was specifically used to constitute the sample of employees required from each firm.

Table 3.2: Sector Stratification

Sector	Number in Study Population	No. of employees in sample
Chemical & Allied	2026	$\frac{2026}{9915} \times 470 = 96$
Food & Beverage	1930	$\frac{1930}{9915} \times 470 = 91$
Motor Vehicle & Accessories	880	$\frac{880}{9915} \times 470 = 42$
Paper & Board Sector	1300	$\frac{1300}{9915} \times 470 = 62$
Pharmaceutical &Medical Equipment	330	$\frac{330}{9915} \times 470 = 16$
Plastic & Rubber	2204	$\frac{2204}{9915} \times 470 = 104$
Textile	1245	$\frac{1245}{9915} \times 470 = 59$
Total	**9915**	**470**

Source: KAM (2018)

Table 3.3: Stratified sampling of employees from firms in each Sector

Manufacturing Sector	Name of Manufacturing firms	Study Population	Sample size
Chemical & Allied sector	Osho Chemicals Ltd	576	27
	Desbro Kenya Ltd	240	11
	Crown Paints Kenya Ltd	500	24
	Twiga Chemicals	280	14
	Synresins	190	9
	Chemigas Kenya Ltd	240	11
Food & Beverage	Manji Food Industries	500	24
	Nestle Kenya Ltd	690	33
	DPL Festive Limited	740	35
Motor Vehicle & Accessories	Pipe Manufacturers Ltd	340	16
	Izusu Kenya	540	26
Paper & Board Sector	Kartasi Industries Ltd	320	15
	East African Packaging industries	640	30
	Techpak Industries Ltd	340	16
Pharmaceutical & Medical Equipment	Beta Healthcare International Ltd	140	7
	Cosmos pharmaceutical Ltd	190	9
Plastic & Rubber	Silpack Industries Ltd	340	16
	King plastics Industries Ltd	894	43
	Super Manufacturers	340	15
	Abcos Industrial Company Limited	240	11
	Paras Industries Limited	390	18
Textile & Apparel	Alliance Garment Industries Kenya	940	45
	Supra textiles	305	14
Total		**9915**	**470**

3.7 Unit of Analysis

The unit of analysis is the component from which information is obtained (Kathuria, Partovi, & Greenhaus, 2010). Since the main aim of this research was to clarify different factors affecting IWB among employees drawn from manufacturing firms, the unit of analysis was the individual employees. This is in cognition of assertions (Hallgren & Olhager, 2009a) that it is not possible for a firm to produce answers to a questionnaire; this has to be done by human respondents. Therefore, it is important to use informants/respondents (single or multiple) in eliciting data about organizational attributes and/or practices (Hallgren & Olhager, 2009b; Kathuria *et al.,* 2010; Miller & Roth, 1994).

3.8 Data Collection, Research Instruments and Procedure

3.8.1 Data Sources

Primary and Secondary sources were utilized in sourcing for data. Secondary sources included company records, new papers, books, magazines and journals while primary sources form the study were sourced though survey methods by administration of questionnaire. The pieces of information sought from employees are contained in the questionnaire (see questionnaire in appendix I).

3.8.2 Questionnaire

The principal tool used for data collection was the paper based self-administered questionnaire. A questionnaire was preferred owing to its versatility, speed with which it collects data, and its structured nature which enables ease of comprehension of items (Grossnickle, 2001). Moreover, the questionnaire was also chosen because it has been found to be affordable and easy to administer (Creswell & Creswell, 2017). Besides by structuring the questionnaire, respondents find it easy responding to items which only require checking the suitable response. Immediate collection of filled

questionnaires significantly increases the rate of response to almost 100% making it a suitable tool (Sekaran & Bougie, 2016). In addition, a questionnaire guarantees privacy to study respondents considering that it does not necessarily require them to reveal their names. Degree of control in sample selection is greatly enhanced through the use of the questionnaire approach to data collection (Burns & Bush, 2007).

The questionnaire was designed to contain five sections consistent with the conceptual framework. The first section focused on collecting data on prevailing status of employee empowerment among manufacturing firms. The second section collected data on levels of employee engagement in respective manufacturing firms. Information from this section was relevant in exploring prevailing levels of employee engagement in the firms. Employee engagement was conceived in the study as a factor that mediates the relationship between employee empowerment and their IWB.

The third section of the employee questionnaire was data on leader member exchange in manufacturing firms drawn from Nairobi industrial area. This information was used to give a pointer of the prevailing status of leader member exchange mechanisms that have been put in place in these industries. The fourth section concentrated on data related to IWB among employees. Finally, the fifth section focused on employee background characteristics that consisted of gender, level of education, age, and experience. The information regarding background characteristics was necessary for controlling the likely influence of these characteristics on the conceptualized relationships.

Response scores were elicited on a 5-point likert type scale scored as follows: 1-strongly disagree; 2-disagree; 3-neutral; 4-agree, 5-strongly agree (Appendix I). The mode of administration of the questionnaire was self-completion. The researcher

enlisted the assistance of two research assistants who were responsible for delivering and collecting the questionnaire to and from the identified respondents. The researcher briefed the assistants on the requirements of the study, and on the need to observe ethical rules and principles governing the study. Choice of the self-completion mode of questionnaire administration was based on its confidential nature (De Leeuw, Hox, & Dillman, 2008).

3.8.3 Data Collection Procedure

Prior to data collection, the researcher first sought permission from Moi University authorities through the department of Business Management to collect data for the purpose of the study (Appendix II). On being granted permission to do so, the researcher then applied for a permit to collect data from the National Council for Science Technology and Innovation (NACOSTI) (Appendix IV). Finally, the researcher made requests to respective management teams, to visit the firms and collect data from employees.

Drop-off and Pick-up (DOPU) self-administered questionnaire method was used. Fowler Jr, (2013) argues that this approach decreases bias errors and increases accessibility to respondents who are geographically dispersed. Respondents in the respective firms were notified of the purposes of the study and details of the relevant ethical considerations. Those who consented to participate in the study were each issued with a copy of the questionnaire given enough time to exhaustively respond to questionnaire items. Once the allocated duration expired, the filled questionnaires were collected and kept in secure custody awaiting analysis. This exercise took one month and half.

3.9 Validity and Reliability

The developed questionnaire was pre-tested for validity and reliability prior to using it for the actual data collection. Neuman (2012) argues that constructs in social science are often not easy to observe directly, and are sometimes quite diverse and ambiguous. Consequently, validity and reliability are crucial techniques in establishing that research findings are credible and truthful.

3.9.1 Pilot Study

According to Arain, Campbell, Cooper, and Lancaster (2010) a pilot study is a small feasibility study aimed at evaluating different elements of the procedures intended for a broader, more comprehensive or confirmatory investigation. The primary objective of pilot study was not to address specific research questions, but to prevent the researchers from launching a large-scale study without sufficient knowledge of the methods proposed. Besides, a pre-test can help identify the short comings that could be experienced during the actual study and hence, put in place corrective measures. Therefore, during piloting, draft questionnaires were distributed to 30 employees Rivatex East Africa, a textile industry in Uasin-Gishu County, who were then excluded in the final data collection. This constituted 6.4% of the sample targeted. 5 to 10 percent of the sample targeted to assist in determining the reliability of the questionnaire is deemed ideal (Cooper & Schindler, 2014). The 30 questionnaires were self-administered. In the end, all the 30 questionnaires distributed for the pilot study were received and coded. They were then coded and entered into the SPSS software for analysis by use of the descriptive (percentages) and inferential statistics, applying correlations and regressions. However, at this point, the study was more concerned with the reliability and validity of the research instruments as adapted from the previous relevant researches.

3.9.2 Reliability of Research instrument

Reliability is defined as the consistency or dependability with which an instrument measures a given construct (Neuman, 2012). It is the degree to which measures can be protected from random error and thus yield reliable results and ascertain the research instrument's consistency when the process is repeated. The main goal of a reliability test in this study was to minimize the biases and errors in a research study which is an important consideration when assessing the value of any research (Yin, 2003). Therefore, the Cronbach alpha (α) formula was applied and the results obtained from the pilot study presented in table 3.4 to determine the reliability as based on internal consistency.

After analysing the data for pilot study, the result showed that Cronbach's alpha for all scales varied within an acceptable range from .76 to .81 (Table 3.4). A Cronbach's alpha reliability coefficient of 0.7 and above is used to signify that the scales are reliable in measuring the given constructs (Maizura, Masilamani, & Aris, 2009). The Cronbach coefficients for all variables are presented in table 3.4.

Table 3.4: Reliability Results for Pilot study

Part of Questionnaire	Variable	Number of Items	Cronbach's Alpha
Part A	Employee empowerment	20	.768
Part B	Employee engagement	12	.777
Part C	Leader member exchange	8	.778
Part D	Innovative work behaviour	10	.813

Source: Author 2019

3.9.3 Validity of Research Instrument

Validity can be defined as the extent to which the results obtained represent a phenomenon being studied (Sekaran, 2003). It is the appropriateness, correctness, meaningfulness and the usefulness of any inferences that the researcher draws based

on the data collected by use of an instrument (Creswell & Creswell, 2017). Thus, it was used as a measure how a research instrument met its function.

Face validity was apparent from the review of the questions and constructs used in this study. The instrument also had face validity as the items in the questionnaire, on the face of it, appeared to measure the concepts that the researcher wants to study (Uma Sekaran & Bougie, 2016). Face validity can simply be improved by rewording and restructuring items in terms of what appears relevant and plausible in the particular setting in which it is intended to be used (Anastasi, 1986). Three questions focusing upon employee empowerment were rephrased and restructured after receiving comments from academicians, who are experts in these concepts.

In the current study, Factor analysis and Pearson's correlation coefficient were employed in order to ensure convergent validity between items measuring the same construct, as well as to ensure discriminant validity among items measuring differing constructs. This study's content validity was tested as well by prior literature review serving as the source of questions, professional panels as the sources of valuable judgments for the concepts in questions (Cooper, Schindler, & Sun, 2006). Certain revisions were possible for the instrument according to the suggestions provided. The data gathered through the pilot survey was also used to adjust the questionnaire to increase the level of clarity.

3.9.4 Factor Analysis

Exploratory factor analysis was used in this study for the reduction of large number of items or variables into super variables (Field, 2017). In essence, factor analysis was employed to reduce the scales measuring the study variables, by segregating the

various dimensions and associated factor loadings. This reflected the multivariate nature of the variables (Field, 2017; Kline, 2015).

The principal component analysis (PCA) technique was used to derive a small number of independent linear combinations (principal components) from the larger set of sub-variables while retaining as much of the information in the original variable as possible. The PCA technique was therefore used to establish the factor structure of employee empowerment, employee engagement, leader member exchange, and employee innovative work behaviour variables, with a view to reducing the large number of items in order to identify strong patterns within the dataset (Hair *et al.*, 2010). The Kaiser Meyer-Olkin (KMO) measure of sampling adequacy was used to compare the magnitude of the observed correlations coefficients and that of partial coefficient correlations. KMO values below 0.5 do not permit the use of factor analysis. Any item that failed to meet the criteria of having a factor loading value of greater than 0.5 and does not load on only one factor was dropped from the study (Hof, 2012).

3.9.5 Data Transformation and Index Construction

Data was transformed before carrying out further analysis to help better examine the distribution. Sekaran and Bougie (2016) avers that data transformation is the transformation of the observations $x_1, x_2, \ldots, x_n$ is a function T that replaces each x_i by a new value $T(x_i)$ so that the transformed values of the batch are $T(x_1)$, $T(x_2)$,…, $T(x_n)$. In so doing, the researcher applied arithmetic formula by getting the summing all the item that explained a variable and dividing that with the number of items in the questionnaire (Sekaran & Bougie, 2010). Data transformation was applied in this study to improve the compatibility of the data with assumptions underlying a

modelling process, to linearize the relation between two variables to modify the range of values of a variable using arithmetic transformation method (Fox, 2019). Transformation was done to dependent variables (employee empowerment), independent variables (Innovative work behaviour), mediator (employee engagement), and moderator (Leader member exchange).

3.10 Measurement of Variables

The proposed study employed four variables. IWB was employed as the dependent variable; employee empowerment as the independent variable; employee engagement as the mediating variable; and leader member exchange will be the moderating variable. Variable measurement was mostly be adopted form previous studies and modified for the needs of the study. The assigned numerical codes were as follows: strongly disagree (SD), disagree (D), neutral (N), agree (A) and strongly agree(SA) ranging from 1-5. The scores were averaged and transformed into the indices of the variables.

3.10.1 Measurement of Innovative Work Behaviour

IWB, the dependent variable was measured using 10 items adopted from (J. De Jong & Den Hartog, 2010). De Jong identifies constructs such as idea exploration, idea generation, idea promotion, and idea implementation as closely linked with innovative work behaviour. Consequently, the 10 items measuring innovative behaviour were modified to reflect employee innovativeness in terms of exploring novel ideas; generating ideas; promoting generated ideas; and being able to implement novel ideas. Response scores were elicited on a 5-point likert type scale scored as follows: 1-strongly disagree; 2-disagree; 3-neutral; 4-agree, 5-strongly agree.

3.10.2 Measurement of Employee Empowerment

Employee empowerment is conceived in the proposed study as the granting of employees the opportunity and authority to be involved in making decisions in areas that affect their jobs. This variable was treated as the independent variable, and measured using indicators adopted from Spreitzer (1995) and modified for purposes of the study. Four constructs namely: power (autonomy), information, knowledge, and reward constituted 20 items that were used to measure employee empowerment. Response scores were elicited on a 5-point likert type scale scored as follows: 1-strongly disagree; 2-disagree; 3-neutral; 4-agree, 5-strongly agree.

3.10.3 Measurement of Employee Engagement

Employee engagement was conceptualized as the mediating variable in the study. Schaufeli, Salanova, González-Romá, and Bakker (2002), define employee engagement as a barometer that determines the degree of physical, cognitive and emotional association an individual has with the respective organization. In regard to this definition, employee engagement was measured in terms of care demonstration, dedication, accountability, and enthusiasm; and results orientation. A total of twelve items were used to measure employee engagement. Response scores were elicited on a 5-point likert type scale scored as follows: 1-strongly disagree; 2-disagree; 3-neutral; 4-agree, 5-strongly agree.

3.10.4 Measurement of Leader Member Exchange

Leader member exchange was conceptualized as the moderating variable to the mediated relationship between employee empowerment and innovative work behaviour. Graen and Uhl-Bien (1995) aver that the Leader Member Exchange (LMX) theory presupposes that leaders are able to vary the manner in which they relate or exchange with subordinates. Leader member exchange was therefore

measured using eight items adopted from the Graen and Uhl-Bien (1995) leader member exchange measurement scale. Response scores were elicited on a 5-point likert type scale scored as follows: 1-strongly disagree; 2-disagree; 3-neutral; 4-agree, 5-strongly agree.

3.10.5 Control Variables

Based on the previous studies, this current study controlled for demographic characteristics for purposes of estimating the effects of the hypothesized variables. For all the analysis in this study, gender, age, levels of education and experience control variables were include.

Employee gender was measured through the number of male and female respondents categorised as 0 and 1 respectively. The employee age was measured through the analysis of the five categories of ages, those below the age Less than 20 years, 21-25, 26-30, 31-35 and those over 35 years. Education level was measured at certificate, diploma, masters, bachelors, postgraduate levels. Furthermore, the employee experience was measured with the following experience ranges; less than 5 years, 5-10 years, 11-15 years, 16-20 years.

3.10.6 Control of Common Method Biases

Though the validity construct for all variables in the study were tested, the analysis for the study was apparently influenced partly by the common method bias. This happens whenever a common difference between any two concepts becomes a function of the common measurement and/or source used to collect data (Ashikali & Groeneveld, 2015; Meier & O'Toole Jr, 2013). This results in systemic measurement errors that can inflate the interactions between variables (Ashikali & Groeneveld, 2015; Podsakoff, 2003). In doing so, such measurement errors appear to threaten the

validity of the conclusions drawn about the relationships between the various measures. Common method biases may also be very problematic because they form the main sources of measurement errors. In general, measurement errors are known to have both a random and a systemic component (Podsakoff, 2003) . One of the main sources of systematic measurement errors is the method variance which arises out of a variety of sources of data (Bagozzi, Yi, & Phillips, 1991). This means that the common method variance would occur when the measures of both the predictor and criterion variables are obtained from the same measurement (Podsakoff, 2003). In this regard, employee empowerment (independent variables) in manufacturing firms, employee engagement (mediator) Leader Member exchange (moderator) and Innovative work behaviour (dependent variable) were all measured by perceptions of respondents (individual employees within manufacturing firms in Nairobi) in one questionnaire. However, to avoid common method biases, this study collected the measures of variables from different sectors. The advantage of this procedure is that it makes it impossible for the mind-set of the source or the one rating to show bias over the some relationship between the explanatory and criterion variable. This eliminates the effects of principles of continuity, implicit theories, and tendencies of social desirability, dispositional and intermittent mood states, and any tendencies to acquiesce or react leniently on the part of the rater. Since this study also collected data from anonymous respondents, they were reassured that there were no correct or incorrect responses, but they could answer the questions as honestly as possible.

3.10.7 Non-Response Bias

When a sample differentiates systematically with the original population from which it is drawn, it is regarded as being biased (Fowler Jr, 2013). Under such a situation non-response bias is experienced when some potential respondents fail to respond to

the questionnaire items. Non-response is viewed as selective when distinctive characteristics exhibited by non-responding participants are not captured, thus leaving only those of respondents who respond to the items (Dillman, 2000).

It is noted that bias arising from non-response is commonly experienced in surveys conducted through mail or phone. The current research employed self-administered questionnaires which were delivered directly to selected firms. In this way, non-response bias was significantly minimized.

Fowler Jr (2013) identifies four measures through which bias due to non-response can be eliminated or reduced. The layout of the questionnaire was identified as the first measure. Fowler Jr. argues that the layout should be explicit enough to facilitate ease of checking the progress. Item spacing was identified as the second measure, and was catered for in the current study to facilitate ease of item reading. Response options were the third measure identified by Fowler Jr (2013). The current study ensured that response options were designed for ease of choosing. The final measure identified and employed in the current study was to be clear on whether to check or to circle a specific option.

3.11 Data Analysis

Upon the return of questionnaires, the questionnaires were coded using numerical values ranging from 0 to 5 and data entered into the SPSS code book. To summarize the demographic profiles of respondents, this study used descriptive statistics (frequencies and percentages), and the results were presented in charts and tables. Percentages were also used to evaluate and present the different responses to statements that helped to quantify the particular variables in the sample. In addition, to test the eight hypotheses, correlations and regressions were used. The amount of

impact on the dependent variable (innovative job behaviour) as a result of the shift in HRM activities was clarified by linear and multiple regressions. The SPSS version 23 software was used for preliminary data screening and cleaning and for descriptive and inferential analysis.

3.11.1 Data Screening and Cleaning

Data was screened and cleaned for missing values and outliers. According to Baraldi and Enders (2010), missing data are a result of factors such as respondents' refusal to respond to sensitive issues relating to their age, marital status, social and natural attrition. Data was analysed for missing data patterns. Data collected for the study had all the required information for every case. Hair, Black, and Babin (2010) alludes that it is it necessary when dealing with missing data to find out if the data was missing completely at Random-MCAR or missing at Random-MAR or if there is some pattern to why the data points are missing (missing not at Random-MNAR). According to Hair, Black, Babin and Anderson (2009) if only about 5 percent or less of the data are MCAR or MAR from a large data set almost anything done yield the same results. The researcher assumed that the missing data that were below 5% were missing at random (MAR) in which case missing data was ignored and replaced by series means, except if the missing data that exceed 5% (Alison, as cited in (Hair et al., 2010). List-wise deletion was used to delete from further statistical analysis, all cases having missing values above 5%. Meyers (2005), avers that list wise deletion can be used in a variety of multivariate techniques such as multiple regression without requiring additional commands or computation.

Masconi *et al,* (2015), defines outliers as scores that markedly differ from others, and identifies outliers as either univariate in which case extreme scores are found on

single variables, or multivariate in which case scores deviate from the centroid of all cases involving predictor variables. Both univariate and multivariate outliers were examined in the proposed study. Univariate outliers were assessed through standardized scores, for which scores outside the interval (-3.0, 3.0) were deemed as outliers (Stevens, 2002).

Mahalanobis distance (D^2) which indicates the distance a particular case deviates from the centroid of all cases for the predictor variables (Tabachnick & Fidell, 2007), were used to assess multivariate outliers. The probabilities associated with computed mahalanobis values were calculated and arranged in ascending order. All values with probabilities below 0.001 were considered to be multivariate outliers.

3.11.2 Correlation Analysis

Correlation analysis was used to assess the relationship between variables (Uma Sekaran & Bougie, 2016). Pearson's correlation coefficient was used to express the strength of the relationships between the study variables (Hair, 2010). The values of the correlation coefficient were given by "r". The value of r lied between -1 and +1 inclusive that is $-1 \leq r \leq 1$. If y increases when x increases, there was a positive relationship which denotes there is a positive correlation between the variables. However, if y decreases when x increases there is a negative or inverse correlation (Hair, 2010).

3.11.3 Descriptive Analysis

Descriptive analysis was conducted ostensibly to explore the status of the study variables as experienced in manufacturing firms under study. The means were used to capture the typical response among employees, while the standard deviations indicated the variability among employee responses and therefore it measured how

consistent employees responded to questionnaire items. Response scores on the questionnaire items was elicited on a 5-point likert scale having the following options: 1-strongly disagree; 2-disagree; 3-neutral; 4-agree; and 5-strongly agree. Analysis of the mean response scores will be conducted on a continuous scale with the following threshold: $M<1.5$–strongly disagree; $1.5\leq M<2.5$ – disagree; $2.5\leq M<3.5$-neutral; $3.5\leq M<4.5$–agree; $M\geq 4.5$- strongly agree.

3.11.4 Inferential Analysis

The main approach to inferential analysis was regression analysis. Inferential analysis focused on the direct effect of employee empowerment on IWB; the mediating effect of employee engagement on the relationship between employee empowerment and IWB; and the moderating effect of leader member exchange on the mediated relationship between employee empowerment and innovative work behaviour. Prior to examining the direct and indirect effects, assumptions of multiple regression analysis were tested.

3.11.5 Assumptions of Multiple Regressions

According to Yu, (2010) the tests of assumptions aided the researcher to authenticate the nature of the data and identify the applicable model for the study that ensured unbiased, consistent, and efficient estimates. Accordingly, if the regression assumptions are violated, they will produce biased estimates of the links between variables, unreliable confidence intervals, as well as significance tests (Chatterjee & Hadi, 2015). Therefore, statistical assumptions were tested to establish whether the data met the normality, linearity, homoscedasticity, multicollinearity and data independence assumptions.

3.11.6 Model Specifications

In order to test the conceptualised relationships, four models were formulated to facilitate the process. This included, direct effect, indirect, conditional and moderated mediation.

3.11.6.1 Model for Direct Effects

In order to test for direct effect, a hierarchical linear regression model was employed. Hierarchical linear regression was used to show whether variables in this study explained a statistically significant amount of variance between employee empowerment (DV) after accounting for all other variables (Ho, 2013). In this study the researcher wanted to determine whether newly added variables improved the significance in *R*2. The following are the direct effect models:

$Y= \beta_0 + C + \varepsilon$……(i)

$Y= \beta_0 + C + \beta_1 x + \varepsilon$……..(ii)

$Y= \beta_0 + C + \beta_1 x + \beta_2 M + \varepsilon$……(iii)

$Y= \beta_0 + C + \beta_1 x + \beta_2 M + \beta 3 W + \varepsilon$……(iv)

$M= \beta_0 + C + \beta_1 W + \varepsilon$……(v)

$M= \beta_0 + C + \beta_1 W + \beta_2 X + \varepsilon$…….(vi)

Where:

C: Control variable

X: Represents the Employee Empowerment

Y: Represents the dependent variable Innovative work behaviour

M: Represents the Employee Engagement

β_1- β_2: Represent the respective Y intercept

ε: Represent the error terms

3.11.6.2 Model for Mediation Effect

The mediation model was used in this study to explain how or why employee empowerment and IWB are related, where a mediating variable (employee engagement) was hypothesized to have no significant effect on the relationship between employee empowerment and IWB. The test of mediation in this study focused on the indirect role employee engagement plays in the relationship between the employee empowerment and IWB. In this study there was only one mediator (employee engagement) intervening in the causal relationship of employee engagement (X) on IWB (Y). In order to test for mediation the following conditions were checked as recommended (Hayes, 2018; MacKinnon, 2012).

The first condition requires that employee empowerment (DV) significantly predict employee engagement (M)

$$M=\beta_0+C+a_1X+\mathcal{E}$$

The second condition required that employee engagement (mediator) significantly predict Innovative work behaviour (DV).

$$Y=\beta_0+C+b_1M+\mathcal{E}$$

The third condition required that employee empowerment (IV) significantly predict innovative work behaviour (DV).

$$Y=\beta_0+C+C'X+b_1M+\mathcal{E}$$

The forth condition provides evidence on the nature of mediation effect in terms of whether full or partial mediation

$$\text{Mediation}=a_1*b_1 \text{ or total effect} - \text{direct effect } C\text{-}C'$$

$$\text{Total effect} = C'+ (a_1*b_1)$$

Conceptually, mediation meant that a change in X led to change in M (path a), and that change in M led to change in Y (path b). The indirect effect is shown as path a*b because it is the product of the two paths that connect the predictor X to the mediator M (path a) and the mediator M to the outcome Y (path b). If X is not significant when M is controlled, the finding supports full mediation. If X significant (i.e., both X and M both significantly predict Y), the finding supports partial mediation (Hayes, 2014; (MacKinnon, 2012).

Mediation was established using multiple regression analysis of Hayes process macro (model 4).

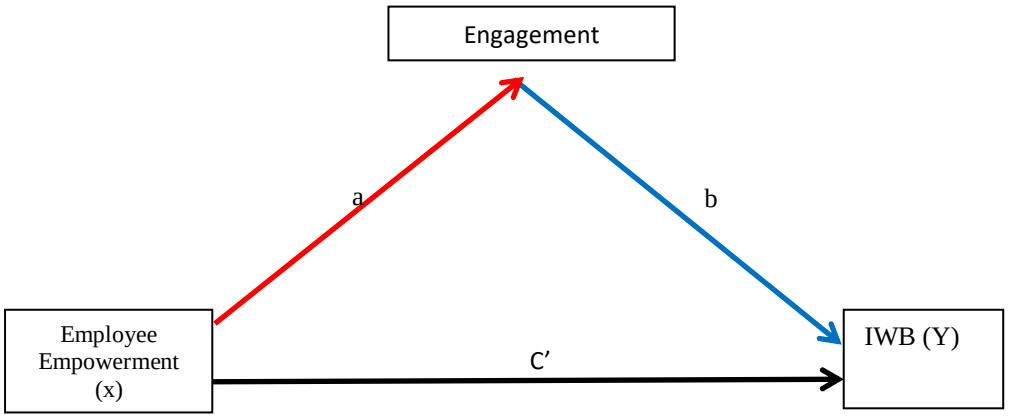


Figure 3.1: Mediation diagram

3.11.6.3 Model for the Moderation Effect

The moderation model was used to test whether leader member exchange moderates the relationship between employee Empowerment and engagement and employee engagement and IWB. It is argued that the moderator variable affects the strength and direction of the relation between an explanatory variable and the response variable: enhancing, reducing, or changing the influence of the moderator (MacKinnon, 2012, Hayes, 2018). Moderation is therefore said to occur when the strength or direction of

the effect of the independent variable on dependent variable varies as a function of the values of another variable using Hayes Model 58 (Hayes, 2018).

Multiple regression analysis was used to test the moderating effect of leader member exchange on the relationship between i. employee empowerment and employee engagement ii. Employee engagement and Innovative work behaviour. Thus moderation was represented by the following model:

- Path a: $M=\beta_0+C+a1X+a2W+a3XW+\mathcal{E}$…….($H_{06}$)

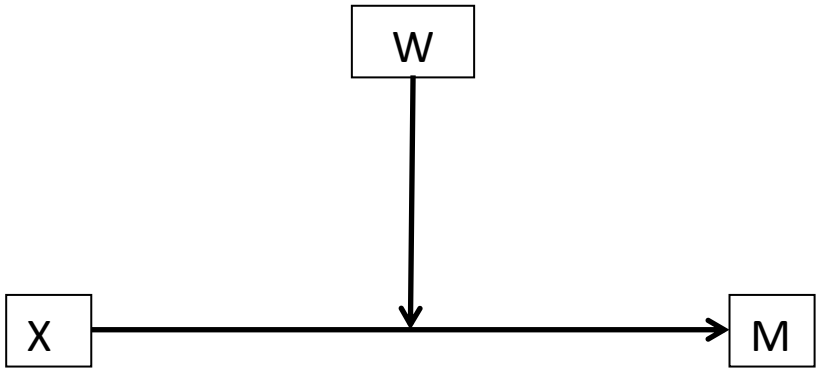


Figure 3.2: Moderation diagram for moderation effect of LMX on the relationship between employee empowerment and employee engagement

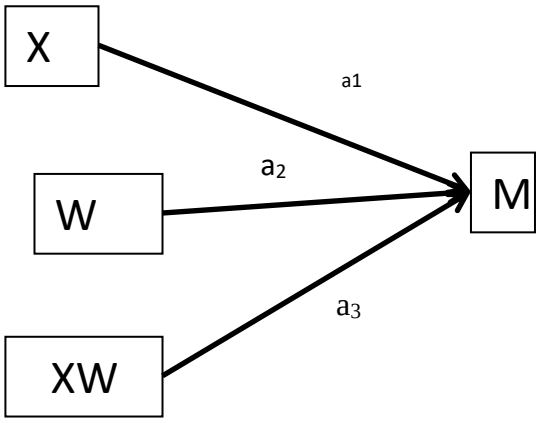


Figure 3.3: Statistical diagram for moderation effect of LMX on the relationship between employee empowerment and employee engagement.

Source: Hayes (2017) Process macro (model 1)

Moderating effect of LMX on the relationship between employee engagement and IWB

Path b: $Y=\beta_0+C+b_1M+b_2W+b_3MW+\varepsilon$…….($H_{07}$)

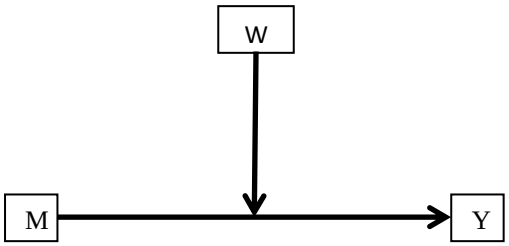


Figure 3.4: Moderation diagram for moderation effect of LMX on the relationship between employee engagement and IWB

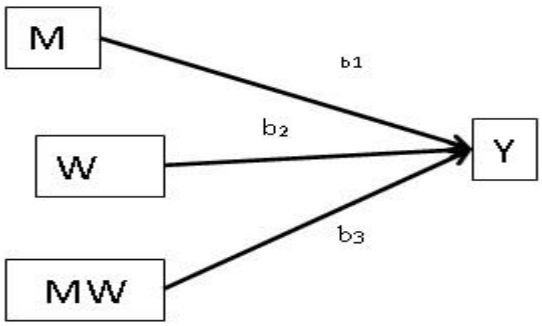


Figure 3.5: Statistical diagram for moderation effect of LMX on the relationship between employee engagement and IWB

Source: Hayes (2017) Process macro (model 1)

Where:

Y: Represents Innovative work behaviour

M: Represents Employee Engagement

W: Represents leader member exchange

XW: Represents the interaction between employee empowerment and leader member exchange.

b_1,b_2,b_3: Represent regression coefficients

ε_4: Represents the error terms

3.11.6.4 Moderated Mediation Model

Moderated mediation in this study represented a combination of employee engagement (mediation) and LMX (moderation) effects on the relationship between employee empowerment and IWB. Thus, a moderated mediation model stipulates that the mediation effect is dependent on the level a moderator (Hayes, 2018). Preacher, Rucker, and Hayes (2007) describe at least five ways in which a moderated mediation effect can function. First for moderated mediation to operate there should be an interaction between the predictor variable and the mediator in predicting the outcome variable. For example, there may be an interaction between employee empowerment and LMX in predicting IWB. Secondly, there must be an interaction between the predictor variable and the moderator in predicting the mediator. For example, there may be an interaction between employee empowerment and LMX in predicting employee engagement. Thirdly, there must be an interaction between the mediator and moderator in predicting the outcome variable. For example, perhaps there is an interaction between engagement and LMX in predicting IWB. Forth, paths a (the link between the predictor and mediator) and b (the link between the mediator and outcome) must be moderated, but by different variables. Finally, paths a and b might be moderated by the same variable. For example, in this study LMX moderate the link between empowerment and Engagement, as well as the link between engagement and IWB. Regardless of the model being tested, moderated mediation models were related with the following two equations: (a) prediction of the mediator variable from the predictor variable and (b) prediction of the outcome variable from the predictor and mediator variables. Each of these equations include moderator along with relevant interaction terms (Preacher, Rucker, & Hayes, 2007).

Consequently, a moderated mediation analysis was tested using the methods recommended by Hayes, 2018 (model 58) of the PROCESS macro v3.2. Moderated mediation hypothesis (H08) in this study, paths a and b were moderated by LMX and two equations were computed. The first equation was for the prediction of engagement (the mediator). The equation included an interaction between employee empowerment and employee engagement. The second equation, predicted IWB (the outcome variable), which include an interaction between engagement and LMX along with the control variables. This model was tested to find out whether the indirect effects through employee engagement were conditional based on the level of LMX. Second stage (path b Conditional indirect effects were tested for both the first and second stage, that is path a and b respectively. Separate regression procedures were conducted for the first stage (path a) (Hayes 2018). Conditional indirect effects were represented by a significant interaction.

Moderated mediation = $(a_1+a_3w)+(b_1+b_3w)$ ……H_{08}

3.11.6.5 Statistical Models

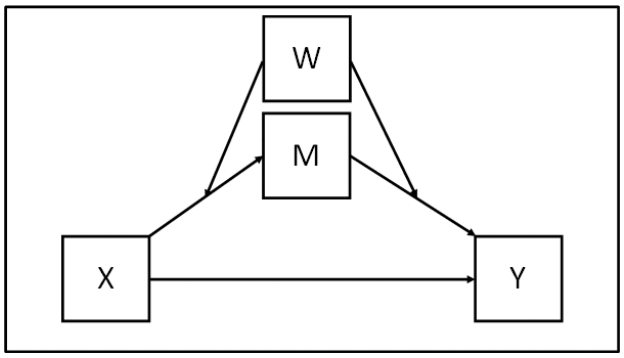


Figure 3.6: Statistical model for moderated mediation

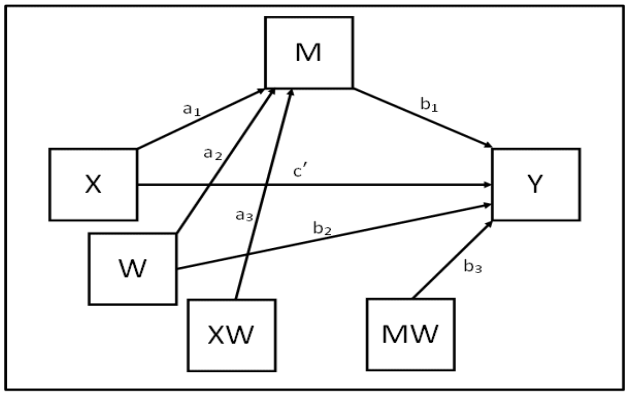


Figure 3.7: Statistical model for moderated mediation

Source: Hayes (2018) Process macro (Model 58)

Where:

X: Represents the independent variable (Employee empowerment)

W: Represents the moderator variable (Leader Member Exchange)

WX: Represents the product of the interaction of the independent variable (Employee Empowerment) and the moderator variable (Leader Member Exchange)

MW: Represents the product of the interaction of the mediator (Employee engagement) and the moderator variable (Leader Member Exchange)

M: Represents the mediator variable (Employee empowerment)

Y: Represents the dependent variable (Innovative work behaviour)

3.11.6.5 Statistical Tools for Testing Hypothesis

Table 3.5: Summary of Statistical Tools for Hypotheses Testing

Hypothesis	Tools	Decision rule
H_{01}: Employee empowerment has no direct significant effect on innovative work behaviour	β-regression coefficient	Reject H_{01} if P- value ≤ 0.05 otherwise fail to reject H01 if P-value is > 0.05
H_{02}: Employee engagement has no significant direct effect on innovative work behaviour.	β-regression coefficient	Reject H_{02} if P- value ≤ 0.05 otherwise fail to reject H01 if P-value is > 0.05
H_{03}: Leader-member exchange has no significant direct effect on innovative work behaviour.	β-regression coefficient	Reject H_{03} if P- value ≤ 0.05 otherwise fail to reject H01 if P-value is > 0.05
H_{04}: Employee empowerment has no significant direct effect on employee engagement.	β-regression coefficient	Reject H_{04} if P- value ≤ 0.05 otherwise fail to reject H_{04} if P-value is > 0.05
H_{05}: Employee engagement has no significant mediating effect on the relationship between employee empowerment and innovative work behaviour.	β-regression coefficient, R2, ΔR2, p-value, t-value, F-statistics, Coefficient of Determination LLCI-ULCI	Reject H_{05} if P- value ≤ 0.05 otherwise fail to reject H_{05} if P-value is > 0.05. Non-significant if there is a zero between the Confidence intervals otherwise significant if there is no zero in the confident intervals
H_{06}: Leader-member exchange has no significant moderating effect on the relationship between employee empowerment and employee engagement.	β-regression coefficient, R2, ΔR2, p-value, t-value, F-statistics, Coefficient of Determination LLCI-ULCI	Reject H_{06} if P- value ≤ 0.05 otherwise fail to reject H_{06} if P-value is > 0.05. Non-significant if there is a zero between the Confidence intervals otherwise significant if there is no zero in the confident intervals
H_{07}: Leader-member exchange has no significant moderating effect on the relationship between employee engagement and innovative work behaviour	β-regression coefficient, R2, ΔR2, p-value, t-value, F-statistics, Coefficient of Determination LLCI-ULCI	Reject H_{07} if P- value ≤ 0.05 otherwise fail to reject H_{07} if P-value is > 0.05. Non-significant if there is a zero between the Confidence intervals otherwise significant if there is no zero in the confident intervals
H_{08}: Leader-member exchange has no significant moderating effect on the indirect effect on the relationship between employee empowerment and innovative work behaviour through employee engagement	β-regression coefficient, R2, ΔR2, p-value, t-value, F-statistics, Coefficient of Determination LLCI-ULCI	Reject H08 if there is a zero between the Confidence intervals otherwise significant if there is non- zero in the confident intervals.

Source: Author (2019)

3.12 Limitations of the Study

The researcher experienced a number of limitations during the research process, but these did not significantly interfere with the outcome of the study. First, the research was carried out in one geographical (Nairobi, Industrial Area) because of the high production and competition among the firms. The sample was also limited to Members of Kenya Association of Manufacturers (2018). Hence the generalizability of results of the study may be limited.

Secondly, the study variables were measured on a five-point likert scale ranging from 1= strongly disagree 5= strongly agree. One of the major limitations of this scale is its inability to measure true attitudes of respondents. Respondents tend to portray themselves in a more socially favourable light rather than being honest, hence may avoid extreme response categories. Similarly, respondents answers may be influenced by previous questions or may heavily concentrate on one side response (for instance, strongly disagree or strongly agree).

Thirdly, another limitation was the use of self-administered questionnaires. Self-administered questionnaires present a challenge because respondents may not understand the questions and therefore give incorrect responses. The results may not estimate the true relationship between study variables.

Finally, the study employed a cross sectional survey design. Cross sectional studies do not measure causal effects on the observed relationships between study variables and therefore may not give actual relationships that exist between employee empowerment, employee engagement, LMX and innovative work behaviour of manufacturing firms in Kenya.

3.13 Ethical Considerations

The study was undertaken in consideration with ethical issues that arise in social science inquiry. The process of collecting, analysing, and interpreting data was done in a way that respects the rights of participants and individual respondent groups. Specifically, prior to data collection, an introductory letter was prepared for the purpose of seeking informed consent from respondents to participate in the study. Details revealing the purpose of the study and guarantee of anonymity and confidentiality were included in the letter (Appendix I). All research assistants were required to show the letter to all potential respondents when soliciting participation in the research.

As was indicated in the introductory letter, the right of anonymity and confidentiality was guaranteed. This involved the assurance that the study was only for academic purposes and not for circulation to other parties. Anonymity was assured by concealing respondent's identities and also ensuring that the information collected is not linked to the respondent. Consequently, the respondent's name was not be required. Confidentiality was assured by the researcher taking responsibility to protect all data gathered within the scope of the study.

Furthermore, the study ensured that the respondent's right to privacy was guaranteed. This is the freedom of an individual to determine the time, extent and circumstances under which the private information should be shared with or withheld from others. The employees were visited for data collection at their own convenient time.

In addition, the research kept to the strict guidelines to create an original thesis without plagiarizing the works of other researchers.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION, INTERPRETATION AND DISCUSSION

4.0 Introduction

This chapter presents data analysis and interpretation of collected data based on the objective and hypothesis. It expounds on response rate, respondent demographic characteristics, study variable description, factor analysis, correlation analysis, and regression assumption. The findings are structured according to the conceptual model displaying broad categories of impact factors for employee empowerment on IWB in manufacturing firms in Nairobi County, Kenya.

4.1 Response Rate

The study targeted 9915 employees from different sectors in manufacturing firms in Nairobi City County. Data was collected for a period of two months from May to June 2019. A total of 470 questionnaires were therefore designed and administered to the sampled respondents. Out of the expected 470 respondents, 396 questionnaires were returned duly filled representing response rate of 84.3%. While 74 questionnaires were not returned as depicted in table 4.1. This was deemed ideal for the study basing on recommendations of (Saldivar, 2012) a response rate in the range 50% and 70% . Out of 396 questionnaires that were returned, 12 were excluded due to nonresponse and incompleteness. The researcher thus ended up with 384 valid questionnaires representing a rate of 82% which was a high response rate according to (Saldivar, 2012)**.**

Table 4.1: Response rate of questionnaires

Response rate	No	Percentage%
Administered questionnaires	470	100
Unreturned questionnaire	074	16.1
Unusable questionnaires	012	2.7
Valid questionnaires	384	82
Total	**470**	**100**

Source: *Research Data, 2019*

4.2 Data Screening and Cleaning Before the Analysis

Raw data was screened and cleaned before proceeding for analysis to ensure data accuracy and check for other potential problems according to guidelines provided by (Tabachnick & Fidell, 2013). On receipt of any completed questionnaires, the questionnaires were prepared for screening and numbered to ensure they were accounted for. The questionnaires that were left blank were discarded while the questionnaires with less than 5% missing cases were replaced using means. Furthermore, data was converted into numeric codes and the researcher ensured these codes were exhaustive and mutually exclusive. A code book was then prepared in SPSS program to describe in specific detail the coding scheme to be followed. Use of code book was important because it helps to describe the code assignment for each response category of every item in the questionnaire (Hair et al., 2010).

4.2.1 Missing Data

Missing data has been identified as one of the main issues in data analysis (Tabachnick & Fidell, 2013). It has been pointed that the amount of data missing is not an issue but the pattern of missing data cannot be ignored. Hair, Black, Babin, and Anderson (2010) define missing data as the unavailability of suitable value on one or more variables for data analysis. In view of this missing data can lead negative

consequence in analysis. The researcher therefore took precautionary action right from the field in an attempt to make sure data was free from any missing values. According to Graham, Cumsille, and Elek-Fisk (2003), data may be missing completely at random (MCAR); missing at random and ignorable (MAR); or missing not at random needing not to be ignored (MNAR). In this study, missing values were assessed using the MCAR technique. Consequently, all the cases having missing values in the excess of 5% were deemed to be very serious and deleted from further analysis (Enders, 2010) .

Twelve cases (11, 47, 94, 110, 195, 209, 291, 296, 311, 312, 314 and 315) had missing values in the excess of 5%. The twelve cases were deleted. Missing data below 5% were replaced using mean substitution which has previously been used in replacing missing values (Tabachnick & Fidell, 2013). A total of 384 cases were therefore retained from the initial 396 cases for assessment of outliers. (See table in Appendix VIII).

4.2.2 Outliers

Aguinis, Gottfredson, and Joo (2013), posit that outliers relate to extreme values that occur during collection of data, and which may have undesired influence on the findings. There are three methods used to detect outliers (Hair et al., 2010; Tabachnick & Fidell, 2013), univariate detection, bivariate detection, and multivariate detection. In order to detect outliers using the univariate method, there is a need to convert all variables' scores to a standard score. If the sample is small, less than 80 cases, a case is considered an outlier if the standard score is +2.5 or above (Hair et al., 2010). If the sample is larger than 80 cases, an outlier consists of those cases which have standard scores of +3.0 or above.

Multivariate outliers were assessed using Mahalanobis D^2. Mahalanobis D^2 is known as the square distance from the centroid of a data set such that any case having high mahalanobis D^2 value with probability below 0.001 is considered to have multivariate outlier (Garson, 2012). None of the cases had mahalanobis distance with probability below 0.001.

Table 4.2: Residuals Statistics

	Min	Max	Mean	Std. Deviation
Predicted Value	1.95	5.00	3.95	0.57
Std. Predicted Value	-3.51	1.84	0.00	1.00
Standard Error of Predicted Value	0.02	0.12	0.04	0.02
Adjusted Predicted Value	1.95	5.01	3.95	0.57
Residual	-1.28	1.26	0.00	0.44
Std. Residual	-2.87	2.84	0.00	1.00
Stud. Residual	-2.89	2.86	0.00	1.00
Deleted Residual	-1.29	1.28	0.00	0.45
Stud. Deleted Residual	-2.92	2.89	0.00	1.01
Mahal. Distance	**0.14**	**26.38**	**2.99**	**3.19**
Cook's Distance	0.00	0.08	0.00	0.01
Centered Leverage Value	0.00	0.07	0.01	0.01

Note: N=384

Source: *Research Data, (2019)*

4.3 Employee Demographic Characteristics in the Study

Demographic information is deemed important since it provides information regarding research participants (Hair et al., 2010). Demographic information was used to describe the study sample, and to explore their effect on dependent variables. Respondents' general information was examined in terms of gender, level of education, age, and experience working in the manufacturing firms in Nairobi, Kenya as presented in Table 4.3 below. The analysis unveiled that 60.4% of the respondents were male and 39.6% of them were female. The results indicate that male employees comprise majority of the respondents. It is not a surprise that when you think about manufacturing firms, you see it as male dominated. Manufacturing firms have always

been associated with men, especially because more men than women pursue technical degrees needed for work in the industries. Nevertheless, according to the data provided by the General Social Survey (GSS), since the 1970s, there has been a steady increase in women employment in manufacturing firms. However, there is still a huge gender gap that can be observed. The Constitution of Kenya (COK, 2010) requires that both male and female be given the opportunity to participate. This requirement is expected to lead greater outcome for the organisation since both male and female individuals are given a chance to share their knowledge.

The study sought to measure the highest academic qualification the employees had acquired. The study revealed that majority of the respondents were (47.7%) Bachelor's Degree, followed by Diploma (33.3%) while those with certificate and post-graduate degree were 11.2% and 7.8% respectively. It is evident that the employees possess the requisite skills to perform their duties effectively. As such, the employees' educational attainment is part of the organisations' human capital. Again this can be explained by the fact that technical skills training and education in Kenya is governed by a well-established legal and policy framework. The framework has been developed in recent years (from 2010-2017) signifying an increased national awareness to the fundamental role of technical skills in Kenya's economic growth (KAM, 2017).

From the results, the study put into account the age bracket of the respondents. In terms of the age of the employees, 30.2% of the employees are between 21-25 years of age, 25.8% are between 26-30yrs, (25%) are between 31-35 years, (14.8)% are over 35 years of age, (4.2%) are below 20 years of age, The results suggest that most of the employees are between 21-25 years within manufacturing firms. This shows that manufacturing firms hire young people because they believe young employees

bring fresh perspective and a different way of thinking to the business. Mostly, young workforce are eager to learn, build on their experience and apply their skills in the workforce.

Finally, the research set out to assess the length of service of the respondents in their present organisation. This assumed that workers who have served for a long time within an organization are likely to have a clear understanding of the organization's systems and processes. Experience of workers also relates to job satisfaction and dedication. Consequently, the results reveal that 53.1% of the respondents' experience was between 1-5 years, 31% were between 6-10 years, 13% were between 16-20 years, and 2.9% were over 20 years. Based on the above findings, it is clear that most workers have been employed in the business for less than five years, this means there is high turnover among them. This shows there is a tendency to look for better job opportunities and when an opportunity arises, the workers quit. Moreover, the findings are consistent with prior studies,(Ambula, Awino, & K'Obonyo, 2016; Murgor, 2014) which show that the majority of respondents had been employed for less than 10 years at large manufacturing firms.

Table 4.3: Demographic Background of the study

		Frequency	Percent
Gender	Male	232	60.4
	Female	152	39.6
	Total	**384**	**100**
Education	Certificate	43	11.2
	Diploma	128	33.3
	Bachelor's Degree	183	47.7
	Post-graduate	30	7.8
	Total	**384**	**100**
Age	<20	16	4.2
	21-25	116	30.2
	26-30	99	25.8
	31-35	96	25.0
	>35	57	14.8
	Total	**384**	**100**
Experience	1-5	204	53.1
	6-10	119	31
	11-15	36	9.4
	16-20	14	3.6
	>20	11	2.9
	Total	**384**	**100**

***Source**: Research Data, (2019)*

4.4 ANOVA/T-test of Demographic Variables

ANOVA and t-test were used to examine relationships between demographic characteristics and study variables (Ng, *et al*, 2002). Cross tabulation of categorical data was employed to test this relationship and to compare results between demographic characteristics and study variables through SPSS. In line with this study, one-way analysis of variance (ANOVA) was used to determine whether there were any statistical significant differences between the means of demographic characteristics (gender, education, age, and experience) and study variables (Employee empowerment, engagement, LMX and IWB (Winter 2011). In ANOVA case, the F statistic was administered to determine which of the demographic variables or research objectives vary most significantly when compared to study variables (Seltman, 2012).

Furthermore t-test was applied to determine if there was a significant difference between the means of gender on study variables. T-test helps to compare the average values of the two data sets and determine if they came from the same population (Seltman, 2012). For statistical significant, a P-value of equal or smaller than 0.05 also known as 95% confidence level was used.

4.4.1 Gender and study variables

The study sought to establish the relationship between gender and the study variables. The results presented in Table 4.4 showed that male had the highest mean in power with a mean (M=3.76) considering their female counterpart with mean of (M=3.70). To find out if there is a significant difference between employee power and employee gender, a T-test analysis of variance was performed. The results showed that there was no statistical significant difference between power and gender (T = 0.71, ρ= .48). This showed that employee power is not dependent on employee's gender.

Further, the results showed that female had the highest mean in employee information with a mean (M=3.77), while their male counterpart had the lowest with mean of (M=3.73). T-test analysis of was performed and results showed that there was no statistical significant difference between employee information and employee gender (T = -0.46, ρ= .65). Therefore, gender has no influence on employee information.

Further the results showed that male employees had the highest mean in knowledge with a mean (M=3.90), while the female had the lowest mean of (M=3.88). To find out if there is a significant difference between knowledge and employee gender, a T-test analysis was performed. The results showed that there was no statistical significant difference between knowledge and gender ($T=0.38$, ρ= .70). This showed that employee knowledge is not dependent on employee's gender.

The results showed that female had the highest mean in rewards with a mean (M=3.34), while their male counterpart had the lowest with mean of (M=3.29). T-test analysis was performed and the results showed that there was no statistically significant difference between rewards and employee gender (T = -0.61, ρ= .54). Therefore, gender has no influence on employee's rewards.

Furthermore, the results showed that male had the highest mean in employee engagement with a mean (M= 3.93), while female had a mean of (M=3.85). To find out if there is a significant difference between employee engagement and gender, a T-test analysis was performed. The results showed that there was no statistically significant difference between employee engagement and gender (T = 1.22, ρ= .23). Therefore, gender has influence on employee's engagement.

Further the results showed that female had the highest mean in LMX with a mean (M=3.59), while male had the lowest with mean of (M=3.56). T-test analysis was performed and the results showed that there was no statistical significant difference between LMX and employee gender (T = -0.40, ρ= 0.69). This showed that leader-member exchange is not dependent on employee's gender.

Finally, the results showed that male had the highest mean in IWB with a mean (M=4.08), while their female counterpart had a mean of (M=4.07). To find out if there is a significant difference between IWB and employee gender, a T-test analysis was performed. The results showed that there was no statistical significant difference between IWB and employee gender (T = 0.21, ρ= 0.83). Therefore, IWB is not dependent on employee's gender. Therefore, gender has not been found to have a significant effect on the study variables. It can be concluded that, it is not gender that relates to the study variables but a group of other factors.

Table 4.4: Gender and variables

		descriptive statistics		T-test for Equality of Means	
	Gender	**Mean**	**Std. Deviation**	**T**	**P**
Power	Male	3.76	.78	.71	.48
	Female	3.70	.84		
Information	Male	3.73	.71	-.46	.65
	Female	3.77	.78		
Knowledge	Male	3.90	.66	.38	.70
	Female	3.88	.68		
Rewards	Male	3.29	.79	-.61	.54
	Female	3.34	.85		
EE	Male	3.93	.62	1.22	.23
	Female	3.85	.63		
LMX	Male	3.56	.69	-.40	.69
	Female	3.59	.72		
IWB	Male	4.08	.56	.21	.83
	Female	4.07	.57		

***Source**: Research Data, (2019)*

4.4.2 Education and variables

The results presented in Table 4.5 showed that those with post graduate level of education had the highest mean in employee power with a mean (M=3.95), followed by Bachelor's degree (M=3.79), those with Certificate followed with a mean (M=3.74) and those with Diploma had the lowest with mean of (M=3.61). To find out if there is a significant difference between employee power and education level, a one-way analysis of variance (ANOVA) was performed. The results showed that there was no statistical significant difference between employee power and education level (F = 2.01, ρ= .11). This showed that employee power is not dependent on employee's level of education.

Further, the results showed that employees with post graduate had the highest mean in information with a mean (M=3.95), those with bachelor's degree had (3.76), followed by those with certificate with a mean (M=3.75) while those with diploma had the lowest with mean of (M=3.69). One-way analysis of variance (ANOVA) was

performed and results showed that there was no statistical significant difference between information and education level (F = 0.98, ρ= .40). Therefore, education level has no influence on employee information.

Further the results showed that those employees with post graduate had the highest mean in knowledge with a mean (M=4.23), followed by those of bachelor's degree (M=3.92), those with certificate had a mean of (M=3.84), while those with diploma had the lowest with mean of (M=3.79).To find out if there is a significant difference between information and education level, a one-way analysis of variance (ANOVA) was performed. The results showed that there was a statistical significant difference between information and education level (F = 3.97, ρ= .01).This showed that information is dependent on employee's level of education. This implies that employee are happier at the work place if they believe they have the opportunity to use their abilities and skills. These findings are in line with Lee and Choi, (2003) in which education connects to knowledge to the organization and offer new and distinctive methods of serving clients.

The results showed that those employees with post graduate degree had the highest mean in employee rewards with a mean (M=3.81), those with certificate followed with a mean of (M=3.35) followed by those with bachelor's degree with a mean (M=3.29) while those with diploma had the lowest with mean of (M=3.69). One-way analysis of variance (ANOVA) was performed the results showed that there was no statistically significant difference between rewards and education level (F = 4.60, ρ= .00). Therefore, education level has an influence on employee's rewards. These findings support the work of Negussie (2012) which revealed a significant relationship between rewards and nurse work motivation. It is important that

managers provide employee with up-to date education to apply in the work environment.

Furthermore, the results showed that employees with post graduate had the highest mean in employee engagement with a mean (M=4.12), followed by those with bachelor's degree and diploma (M=3.92) respectively, while those with certificate with a mean (M=3.79). To find out if there is a significant difference between employee engagement and education level, a one-way analysis of variance (ANOVA) was performed. The results showed that there was a statistically significant difference between networking ability and education level (F = 2.11, ρ= .10). Therefore, education level has no influence on employee's engagement.

Further the results showed that employees with post graduate had the highest mean in leader-member exchange with a mean (M=4.05), followed by those with bachelor's degree (M=3.59), those with certificate followed with a mean (M=3.53) while those with diploma had the lowest with mean of (M=3.45).One-way analysis of variance (ANOVA) was performed the results showed that there was a statistically significant difference between self-monitoring and education level (F = 6.24, ρ= .00). This showed that leader-member exchange is dependent on employee's level of education.

Finally, the results show that those employees with post-graduate had the highest mean in IWB with a mean (M=4.19), followed by those with bachelor's degree and diploma (M=4.09, 4.05) respectively, while those with certificate had a mean (M=4.00). To find out if there is a significant difference between innovative work behaviour and education level, a one-way analysis of variance (ANOVA) was performed. The results showed that there was a statistically significant difference

between IWB and education level (F = 0.85, ρ= .47). Therefore, innovative work behaviour is not dependent on employee's level of education.

Table 4.5: Education and variables

		Descriptive		ANOVA	
		Mean	**Std. Deviation**	**F**	**P**
Power	Certificate	3.74	.79	2.01	.11
	Diploma	3.61	.78		
	Bachelor's Degree	3.79	.84		
	Post-graduate	3.95	.66		
Information	Certificate	3.75	.70	.98	.40
	Diploma	3.69	.74		
	Bachelor's Degree	3.76	.75		
	Post-graduate	3.95	.74		
Knowledge	Certificate	3.84	.71	3.97	.01
	Diploma	3.79	.69		
	Bachelor's Degree	3.92	.65		
	Post-graduate	4.23	.53		
Rewards	Certificate	3.35	.82	4.60	.00
	Diploma	3.22	.77		
	Bachelor's Degree	3.29	.84		
	Post-graduate	3.81	.66		
EE	Certificate	3.79	.61	2.11	.10
	Diploma	3.85	.63		
	Bachelor's Degree	3.92	.63		
	Post-graduate	4.12	.57		
LMX	Certificate	3.53	.79	6.24	.00
	Diploma	3.45	.72		
	Bachelor's Degree	3.59	.65		
	Post-graduate	4.05	.63		
IWB	Certificate	4.00	.60	.85	.47
	Diploma	4.05	.57		
	Bachelor's Degree	4.09	.55		
	Post-graduate	4.19	.50		

Source: *Research Data, (2019)*

4.4.3 Age and variables

The study deemed it important to establish the relationship between employee age and study variables. The results presented in Table 4.6 showed that employees over 35 years had the highest mean in power with a mean (M=3.97), while between 21-25 years had the lowest with mean of (M=3.61).To find out if there is a significant

difference between power and age difference, a one-way analysis of variance (ANOVA) was performed. The results showed that there was a statistical significant difference between power and age difference (F = 3.59, ρ= .01). This showed that employee power is dependent on employee's age. The findings reveal that power tends to increase with age.

Further, the results showed that between 31-35 years had the highest mean in information with a mean (M=3.91) while below 20 years had the lowest with mean of (M=3.59). One-way analysis of variance (ANOVA) was performed to find out if there is a significant difference. The results showed that there was statistically significant difference between information and age difference (F = 2.50, ρ= .04). Therefore, age has an influence on employee information.

Further the results showed that over 35 years had the highest mean in knowledge with a mean (M=4.14) while below 20 years had the lowest with mean of (M=3.61). To find out if there is a significant difference between knowledge and age difference, a one-way analysis of variance (ANOVA) was performed. The results showed that there was a statistically significant difference between knowledge and age difference (F = 5.18, ρ= .00).This showed that knowledge is dependent on employee's age.

The results showed that over 35 years had the highest mean in rewards with a mean (M=3.48) while between 31-35 years had the lowest with mean of (M=3.25).One-way analysis of variance (ANOVA) was performed. The results showed that there was no statistically significant difference between rewards and age difference (F = 0.81, ρ=0.52). Therefore, age has no influence on employee's rewards.

Further the results showed that between 31-35 years had the highest mean in employee engagement with a mean (M=4.04) while below 20 years had the lowest

with mean of (M=3.60).To find out if there is a significant difference between employee engagement and age difference, a one-way analysis of variance (ANOVA) was performed. The results showed that there was a statistically significant difference between employee engagement and age difference (F = 3.76, ρ= .01).This showed that employee engagement is dependent on employee's age.

Furthermore, the results showed that over 35 years had the highest mean in leader-member exchange with a mean (M=3.82) while below 20 years had the lowest with mean of (M=3.29).To find out if there is a significant difference between leader-member exchange and age difference, a one-way analysis of variance (ANOVA) was performed. The results showed that there was a statistically significant difference between leader-member exchange and age difference (F = 5.14, ρ= .00). Therefore, age has an influence on employee's leader-member exchange.

Finally, the results showed that between 31-35 years had the highest mean in innovative work behaviour with a mean (M=4.18) while between 21-25 had the lowest with means of (M=3.99). To find out if there is a significant difference between innovative work behaviour and age difference, a one-way analysis of variance (ANOVA) was performed. The results showed that there was no statistical significant between innovative work behaviour and age difference (F = 1.43, ρ= .22). Therefore, innovative work behaviour does not depend on employee's age.

Table 4.6: Age and variables

		Descriptive		ANOVA	
		Mean	**Std. Deviation**	**F**	**Sig.**
Power	<20	3.63	.52	3.59	.01
	21-25	3.61	.77		
	26-30	3.62	.86		
	31-35	3.89	.80		
	>35	3.97	.76		
Information	<20	3.59	.81	2.50	.04
	21-25	3.65	.77		
	26-30	3.67	.68		
	31-35	3.91	.73		
	>35	3.85	.72		
Knowledge	<20	3.61	.57	5.18	.00
	21-25	3.75	.72		
	26-30	3.83	.66		
	31-35	4.02	.57		
	>35	4.14	.64		
Rewards	<20	3.35	.83	.81	.52
	21-25	3.28	.81		
	26-30	3.31	.79		
	31-35	3.25	.81		
	>35	3.48	.87		
EE	<20	3.60	.55	3.76	.01
	21-25	3.80	.55		
	26-30	3.84	.67		
	31-35	4.04	.61		
	>35	4.03	.67		
LMX	<20	3.29	.76	5.14	.00
	21-25	3.41	.72		
	26-30	3.54	.67		
	31-35	3.71	.66		
	>35	3.82	.68		
IWB	<20	4.04	.49	1.43	.22
	21-25	3.99	.62		
	26-30	4.07	.54		
	31-35	4.18	.46		
	>35	4.08	.62		

***Source**: Research Data, (2019)*

4.4.4 Experience and Variables

This section highlighted the difference between experience and study variables. The results presented in Table 4.7 showed that employees over 20 years had the highest mean in power with a mean (M=4.25) while between 1-5 years had the lowest with

mean of (M=3.67).To find out if there is a significant difference between employee power and employee experience, a one-way analysis of variance (ANOVA) was performed. The results showed that there was a statistically significant difference between employee power and employee experience (F = 3.94, ρ= .00). This showed that employee power is dependent on employee's experience.

Further, the results showed that over 20 years had the highest mean in information with a mean (M=4.30) while between 1-5 years had the lowest with mean of (M=3.70). One-way analysis of variance (ANOVA) was performed and results showed that there was no statistically significant difference between information and employee experience (F = 2.28, ρ= .06). Therefore, experience has an influence on employee commitment.

Further the results showed that between 16-20 years had the highest mean in knowledge with a mean (M=4.33) while between 1-5 years had the lowest with mean of (M=3.82). To find out if there is a significant difference between knowledge and employee experience, a one-way analysis of variance (ANOVA) was performed. The results showed that there was a statistically significant difference between knowledge and age difference (F = 3.44, ρ= .01). This showed that knowledge is dependent on employee's experience.

The results showed that over 20 years had the highest mean in rewards with a mean (M=3.67) while 1-5 years had the lowest with mean of (M=3.23). One-way analysis of variance (ANOVA) was performed the results showed that there was no statistically significant difference between rewards and age difference (F = 1.56, ρ= .19). Therefore, age has no influence on employee's rewards.

Furthermore, the results show that between 16-20 years had the highest mean in employee engagement with a mean (M=4.11) while between 1-5 years had the lowest with mean of (M=3.86). To find out if there is a significant difference between employee engagement and age difference, a one-way analysis of variance (ANOVA) was performed. The results showed that there was a statistically significant difference between employee engagement and age difference (F = 2.02, ρ= .09). Therefore, age has no influence on employee's employee engagement.

Further the results show that over 20 years had the highest mean in LMX with a mean (M=3.99) while between 1-5 years had the lowest with mean of (M=3.49). One-way analysis of variance (ANOVA) was performed and the results showed that there was a statistically significant difference between LMX and employee experience (F = 2.75, ρ= .03).This showed that LMX is dependent on employee's experience.

Finally, the results show that between 16-20 years had the highest mean in IWB with a mean (M=4.18) while between 1-5 years had the lowest with a mean of (M=4.04). To find out if there is a significant difference between innovative work behaviour and employee experience, a one-way analysis of variance (ANOVA) was performed. The results showed that there was no statistically significant difference between IWB and age difference (F = 0.42, ρ= .80). Therefore, IWB is dependent on employee's experience.

Table 4.7: Experience and variables

		Descriptive		ANOVA	
		Mean	**Std. Deviation**	**F**	**Sig.**
Power	1-5	3.67	.77	3.94	.00
	6-10	3.79	.84		
	11-15	3.58	.83		
	16-20	4.31	.51		
	>20	4.25	.65		
Information	1-5	3.70	.75	2.28	.06
	6-10	3.74	.76		
	11-15	3.76	.64		
	16-20	4.24	.63		
	>20	4.05	.59		
Knowledge	1-5	3.82	.67	3.44	.01
	6-10	3.87	.68		
	11-16	4.13	.57		
	16-20	4.33	.49		
	>20	4.05	.61		
Rewards	1-5	3.23	.78	1.56	.19
	6-10	3.36	.83		
	11-15	3.46	.89		
	16-20	3.46	.73		
	>20	3.67	.94		
EE	1-5	3.86	.62	2.02	.09
	6-10	3.90	.66		
	11-15	3.87	.57		
	16-20	4.30	.50		
	>20	4.11	.66		
LMX	1-5	3.49	.69	2.75	.03
	6-10	3.61	.72		
	11-15	3.64	.64		
	16-20	3.93	.69		
	>20	3.99	.69		
IWB	1-5	4.04	.57	.42	.80
	6-10	4.10	.56		
	11-15	4.13	.53		
	16-20	4.18	.58		
	>20	4.10	.39		

***Source**: Research Data, (2019)*

4.5 Factor Analysis

Principal Components Analysis (PCA) was used to reduce variables into principal components that could account for most of the variances in the original variables. According to Laerd Statistics (2015), PCA shares many similarities with exploratory factor analysis and is largely used to reduce a larger set of variables by deleting redundant items. Considering that PCA does not make a distinction between independent and dependent variables (Laerd Statistics, 2015), all the four variables under study were taken through PCA extraction with varimax rotation to check for construct validity. The Kaiser–Meyer–Olkin (KMO) measure of sampling adequacy was used to compare the magnitude of the observed correlations coefficients. KMO values below 0.5 do not permit the use of factor analysis. The details of factor analysis are presented below. Kaiser's (1974) classification shown was used to interpret the KMO index (Table 4.8).

Table 4.8: Kaiser's KMO Classification

KMO measure	Meaning
KMO≥0.9	Marvelous
0.8≤KMO<0.9	Meritorious
0.7≤KMO<0.8	Middling
0.6≤KMO<0.7	Mediocre
0.5≤KMO<0.6	Miserable
KMO<0.5	Unacceptable

***Source**: Kaiser (1974)*

4.5.1 Employee Empowerment

Twenty items were initially identified to measure employee empowerment. The results from the factor analysis showed that the factor loading results for 18 items were above 0.5 while two items did not load. PCA was conducted by first testing sampling adequacy and Bartlett's test of sphericity which were among the

assumptions that PCA must satisfy. Sampling adequacy for the data measuring employee empowerment was tested using the Kaiser–Meyer–Olkin (KMO) measure of sampling adequacy.

The eigenvalue–one criterion was used to establish the number of components to retain (Statistics, 2015). The argument was that since an eigenvalue is the value of variance that a component accounts for, an eigenvalue less than one would be an indication that the component explains less variance than a variable would, which in turn mean that it should not be retained. On the basis of the eigenvalue–one criterion, four components were retained.

To sum up the first factor explained 6.996 eigenvalues of variance which was 19.6% of the total variance. The second component explained 2.103 eigenvalues of variance amounting to 33.3% of the total variance. The third component explained 1.386 eigenvalues of variance which was 45.8% of total variance, while the fourth component explained 1.21 eigenvalues of variance amounting to 58% of total variance as presented in Table 4.9. The suitability of PCA was confirmed by the overall Kaiser–Meyer-Olkin (KMO) measure of .909 which was acceptable on the classification of Kaiser (1974). Bartlett's test of sphericity was statistically significant ($p<0.05$) indicating that data was likely factorable. The four components were named power, knowledge, rewards and information which have been associated with employee empowerment (Demirci & Erbas, 2010). Two items were found redundant and were deleted from further analysis.

Table 4.9: Factor analysis for Employee Empowerment

	Factor Loadings			
Items	**Power**	**Reward**	**Information**	**power**
The firm encourages participative decision making	.838			
The firm gives employees control over resources they need to accomplish their work	.809			
The firm allows authority to be delegated equally to all levels of responsibility	.631			
The firm encourages employees to take self-initiative	.548			
Employees get information they need for their work at the shortest time possible	.599			
In this firm supervisors share knowledge with support staff	.698			
The firm allows employees to use their own discretion in carrying out work assignments				
The firm rewards employees for acquired knowledge and skills				
I am satisfied with the pay I get from the organisation		.749		
The firm rewards every employee according to their work effort		.798		
The firm gives cash award for team performance periodically		.671		
The firm usually organises small non-cash awards e.g, dinners and trips for its staff		.654		
The firm gives employees feedback about their performance			.715	
The firm frequently communicate relevant job information to employees			.554	
The firm regularly supplies information to employees about the performance of our competitors			.751	
The firm encourages two-way communication			.606	
The firm encourages employees to utilize knowledge acquired to solve work related problems				.615
The firm encourage employees to gain and share knowledge through learning and practice				.624
Management recognizes and makes use of my abilities and skills				.660
Employees are provided with an opportunity to learn on their jobs				.797
KMO, Bartlett's Test And Variance Explained				
Eigen values	6.996	2.103	1.386	1.121
Percentage of Cvar	19.583	33.276	45.797	58.035
Bartlett's Test of Sphericity; Approx. Chi-Square	3031.684			
KMO Measure of Sampling adequacy	.909			
Composite Reliability	.887			

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

***Source**: Research Data, (2019)*

4.5.2 Factor analysis for Employee Engagement

Employee engagement was conceptualized as the mediating variable in this study. Twelve items were used to measure employee engagement. A Principal Components Analysis (PCA) was run on the 12 items as depicted in Table 4.10. The suitability of PCA was confirmed by the overall Kaiser–Meyer-Olkin (KMO) measure of .893 which was meritorious on the classification of Kaiser (1974). Bartlett's test of sphericity was statistically significant Chi-Square (χ^2) of 1686.363 ($p<.05$) indicating that data was likely factorable (Hair *et al.,* 2014). PCA revealed two components whose eigenvalues were 5.078 (component 1) and 1.372 (component 2) which explained 29.5% and 53.78% of the total variance respectively (Table 4.10). The interpretation of the data was consistent with the employee engagement attributes being measured with strong loadings of emotional items on component 1 and behavioural items on component 2. The two components were therefore retained.

Table 4.10: Factor Analysis for Employee engagement

	Factor Loading	
Items	**Emotional**	**Behavioural**
I feel strong and vigorous at the place of work.	.627	
I exert a lot of energy on my work.	.575	
I feel happy when I am working intensely.	.727	
It is difficult to detach myself from my job	.805	
When I am working, I forget everything else around me.	.835	
I am proud of the work that I do.	.554	
I exert maximum effort while undertaking my tasks		.728
I always look forward to coming to work		.652
I try my hardest to perform well on my job		.679
At work, my mind is focused on my job		.673
I always look for developmental opportunities that enhance the value of the organization.		.586
I find the work that I do meaningful and purposeful.		.523
KMO, Bartlett's Test And Variance Explained		
Eigen values	*5.078*	*1.372*
Percentage of Cvar	*29.503*	*53.751*
KMO Measure of Sampling adequacy	*.893*	
Bartlett's Test of Sphericity; Approx. Chi-Square	*1686.363, p<.05*	
Composite Reliability	.87	

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

***Source**: Research Data, (2019)*

4.5.3 Leader Member Exchange

Leader member exchange was conceptualized as the moderating variable in this study. A Principal Component Analysis (PCA) was run on the eight items that were used to measure the desired characteristics on leader member exchange. Assessment of the suitability of PCA revealed that the Kaiser–Meyer–Olkin (KMO) index was .828 and fell in the meritorious category (Table 4.11). Bartlett's test of sphericity was statistically significant ($p<0.05$) and indicated that PCA could be run.

The PCA extracted 2 factors with an eigen-value of 3.774 and 1.139 which are greater than 1 (Yong & Pearce, 2013) and cumulative extracted variance of 61.411%. Thus the items were appropriate to explain the variable. Moreover, from the table 4.11 below, bartlett's test of sphericity produced a significant chi-square (χ^2) of 1085.193

(ρ<0.05) (field, 2005), showing that it was appropriate to subject data for factor analysis on this variable of Leader Member exchange (Leech *et al.*, 2013). The two components were consistent with the two levels upon which leader member exchange relations may be analyzed. Consequently, items on formal contract loaded strongly on component 1 while those on informal contract loaded strongly on component 2.

Table 4.11: Factor Analysis for Leader Member Exchange

Items	**Factor Loading**	
	1	2
I feel that my immediate supervisor understands my problems and needs	.801	
My immediate supervisor recognizes my potential	.849	
Regardless of how much formal authority my immediate supervisor has in his position, he helps me to solve work related problems	.752	
I respect my supervisor's knowledge of and competence on the job.	.502	
My supervisor is the kind of person one would like to have as a friend.	.668	
Regardless of the amount of formal authority my immediate supervisor has, I can count on him or her to "bail me out" at his or her expense when I really need it		.576
I do work for my supervisor that goes beyond what is specified in my job description		.853
I am willing to apply extra efforts beyond those normally required to help my supervisor meet his or her work goals.		.749
KMO, Bartlett's Test And Variance Explained		
Eigen values	3.774	1.139
Percentage of Cvar	37.49	61.411
KMO Measure of Sampling adequacy	.828	
Bartlett's Test of Sphericity; Approx. Chi-Square	1085.193	
Average Variance Extracted	.60	
Composite Reliability	.84	

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

***Source**: Research Data, (2019)*

4.5.4 Factor analysis for Innovative Work Behaviour

PCA was conducted by first testing sampling adequacy and Bartlett's test of sphericity which are among the assumptions that PCA must satisfy. Sampling adequacy for the data measuring innovative work behaviour was tested using the Kaiser–Meyer–Olkin (KMO) measure of sampling adequacy. According to Statistics

(2015), the KMO measure is an index that confirms existence of linear relationships between the variables, which is required to run PCA on data. Kaiser's (1974) classification shown was used to interpret the KMO index (Table 4.8).

Ten items were initially identified to measure innovative work behaviour. The results from the factor analysis showed that the factor loading results were above 0.5. Hair Jr, Sarstedt, Hopkins, and Kuppelwieser (2014) suggest factor loading with score .50 and greater as very significant. Following the above criterion factor analysis with help of Principal component analysis PCA was carried out.

The PCA extracted 2 factors with first explaining 4.575 eigenvalues of variance amounting to 32.5% of total variance while the second factor accounted for 56.67% of the total variance with eigenvalues of 1.092. Moreover, from the Table 4.12 below, Bartlett's Test of Sphericity produced a significant Chi-Square (χ^2) of 1408.599 (ρ<.05) and Kaiser – Meyer - Olkin measure of sampling adequacy was .881 above the acceptable value of .50 (Field, 2005), showing that it was appropriate to subject data for factor analysis on innovative work behaviour (Leech *et al.,* 2013). The interpretation of the data was consistent with the innovative attributes that were to be measured. Strong loadings on idea exploration items were experienced on component 1, while those on idea generation were experienced on component 2.

Table 4.12: Factor Analysis for Innovative Work Behaviour

	Factor Loading	
Items	**Idea exploration**	**Idea generation**
I encourage key organization members to be enthusiastic about innovative ideas	.702	
I attempt to convince people to support innovative ideas	.760	
I systematically introduce innovative ideas into work	.821	
I contribute to implementation of new ideas	.694	
I put effort into development of new things	.703	
I encourage key organization members to be enthusiastic about innovative ideas	.702	
I look for an opportunity to improve on existing products, process, technology and work relationships		.784
I recognize opportunities to make a positive difference in my work, organization, department and customers		.712
I pay attention to non-routine issues in my work, department and organisation		.622
IWB4 I search out for new work methods, techniques or instruments		.551
KMO, Bartlett's Test And Variance Explained		
Eigen values	4.575	1.092
Percentage of Cvar	*32.542*	*56.668*
KMO Measure of Sampling adequacy	*.881*	
Bartlett's Test of Sphericity; Approx. Chi-Square	*1408.599,*	*P<.05*
Composite Reliability	.86	

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

***Source**: Research Data, (2019)*

4.6 Reliability Analysis

The study used Cronbach alpha to check for reliability of the research instrument measuring employee empowerment, employee engagement, leader-member exchange and IWB. From the results generated, the Cronbach alpha for each variable was above 0.70 with the highest Cronbach alpha value observed in confidence .887 whereas the lowest value was .837. From the cumulative reliability results, it was revealed that Cronbach Alpha was 944. Evidently, the present study results demonstrate that all variables had a Cronbach alpha of more than 0.70 (Uma Sekaran & Bougie, 2016). Thus, the results met the required threshold for further analysis as presented in Table 4.13.

Table 4.13: Reliability analysis

Variable	Cronbach's Alpha	No of Items	Cumulative reliability
Employee empowerment	.887	18	
Employee engagement	.869	12	**944**
Leader member exchange	.837	8	
Innovative work behaviour	.864	10	

***Source**: Research Data, (2019)*

4.7 Descriptive Statistics for Study Variables

Descriptive statistic was employed to summarize the data and make conclusion about the study variables. Descriptive statistics only make statements about the set of data from which they were calculated (Seltman, 2012). In general, data was summarized, in order to find Standard Deviation, Mean, Skewness and Kurtosis. Mean was considered for making comparisons between variables. Standard deviation (SD) was applied to summarizes how far away the data values were dispersed from the mean (Cooper *et al.,* 2006). A low standard deviation indicates that the values tend to be close to the mean of the set, while a high standard deviation indicates that the values are spread out over a wider range (Kopper, 2002). SD was used to improve interpretation by removing the variance square and expressing the deviations in their original units. Skewness and kurtosis were applied to show how responses were distributed. According to Garson (2012), the accepted range of absolute value of skewness and kurtosis is ± 2.

4.7.1 Descriptive Statistics Results for Employee Empowerment

Drawing from Spritzer (1995), employee empowerment was operationalized as power, information, knowledge and reward. The measurement scale consisted of 20 items measured on a five-point likert type scale ranging from 1 = strongly disagree to 5 = strongly agree. The respondents were asked to indicate the extent to which their

firms focused on defined constructs of employee empowerment. The aggregate score of employee empowerment was computed as an average of the mean score for the four dimensions. Statements with a high mean indicate that the respondents are in agreement (> 3.00). Statements with a low mean is an indication respondents do not agree (< 3.00).

Standard deviation (SD) describes how far the data values are usually from the mean (Cooper *et al.,* 2006). Standard deviation is the most commonly used spread indicator since it enhances understanding by eliminating the square variance and presenting the deviations in their original units. A small SD (< 1) implies that most of the sample means are near the center (mean) and a good estimator of the population mean. A large SD (1 >) indicates that the sample mean is a poor estimator of the population mean since data points are spread over a large set of values (Wan, Wang, Liu, & Tong, 2014). The results of the four constructs of employee empowerment are presented in Table 4.14.

The section highlights the results from table 4.14 of employee empowerment with respect to power. The results indicate that the organization encourages participative decision making (mean=3.53, SD=1.26). Again the organization gives its employees control over resources they need to accomplish their work (mean=3.73, SD=1.04). Employees therefore are responsible for their in the organization. Likewise the organization allows authority to be delegated equally to all levels of responsibility (Mean=3.75, SD=0.98). This showed that managers delegated authority to their subordinates which gave them enough room and space to demonstrate their abilities and skill. The results indicate that the organization encourages employees to take self-initiative (mean=3.88, SD=0.94). The showed that majority of employees in the

manufacturing firms have mastered self-management skills and so they are able to solve issues their managers have not noticed. Furthermore, the organization allows employees to use their own discretion in carrying out work assignments (mean=3.79, SD=1.00).

The section highlights the results from table 4.14 of employee empowerment with regard to information. Majority of the employees get information they need for their work at the shortest time possible (mean=3.65, SD=1.03). Findings show that majority of the employees agree communication is a cornerstone of every organization's survival. The results also reveal that employees got feedback about their performance from the organization (mean=3.83, SD=.94). This reveals that feedback cannot be underestimated in any organization.

The firm frequently communicate relevant job information to employees (mean=3.87, SD=0.91). This showed that information plays a significant role in an organization because it guides every decision an organization expects to make. The organization regularly supplies information to employees about the performance of our competitors (M=3.60, S.D=1.12). Finally the results also disclose that organizations the firm encourages two-way communication (mean=3.49SD=1.154).

The results revealed that employees in this firm supervisors share knowledge with support staff (mean=3.63, SD=1.07). With the mean=3.92, SD=0.92, firm encourages employees to utilize knowledge acquired to solve work related problems respectively. The results imply that knowledge gain and sharing enable employees to acquire and pass the knowledge to other workers. Results show that the firm encourage employees to gain and share knowledge through learning and practice (Mean=3.96, SD=0.90). The results showed that management recognizes and makes use of my

abilities and skills (Mean=3.90, S.D=0.87). Most of the employees are provided with an opportunity to learn on their jobs (Mean=4.04, S.D=0.87).

Results on rewards revealed that with mean=3.36, SD=1.09 the firm rewards employees for acquired knowledge and skills. Mean=2.94 and S.D=1.27 of the respondents are satisfied with the pay they get from the organization. The firm rewards every employee according to their work effort as indicated by (Mean=3.28, S.D=1.11)

The results further reveal firm gives cash award for team performance periodically as given by (mean=3.36, SD=1.09). The employees were in agreement that the organisations they work for usually organized small non cash awards e.g dinners and trips (mean=3.61, SD=1.10) This implies incentives given by the organization normally improve the relationship between the employees and managers because employees feel that they are being appreciated for their efforts and good work.

Generally, employee empowerment capped a mean of 3.60 which indicates that Employment empowerment is very important component within manufacturing firms. The standard deviations range from 0.87 to 1.26 with an overall SD of 0.60. The higher values of standard deviations showed the dispersion in a widely spread distribution. Hence, the measuring statements of the study variables are an approximation to a normal distribution. Further, values of the skewness and kurtosis as displayed in Table 4.14 are within the acceptable values; for skewness < 3 and kurtosis < 10 (Kline, 2005). This showed a normal distribution of the responses with respect to employee engagement within manufacturing firms, thus, suggests that the normality assumption as evidenced in the results appears not to be violated (Joanes & Gill, 1998).

Table 4.14: Descriptive for Employee Empowerment

n=384	Mean	Std. Dev	Skewness	Kurtosis
The firm encourages participative decision making	3.53	1.26	-.48	-.96
The firm gives employees control over resources they need to accomplish their work	3.73	1.04	-.57	-.355
The firm allows authority to be delegated equally to all levels of responsibility	3.75	.98	-.63	.021
The firm encourages employees to take self-initiative	3.88	.94	-.67	.135
Power	**3.74**	**.80**	**-.45**	**-.305**
Employees get information they need for their work at the shortest time possible	3.65	1.03	-.65	-.169
The firm gives employees feedback about their performance	3.83	.94	-.60	.019
The firm frequently communicate relevant job information to employees	3.87	.91	-.80	.555
The firm regularly supplies information to employees about the performance of our competitors	3.60	1.12	-.64	-.299
The firm encourages two-way communication	3.79	.99	-.78	.18
Information	**3.75**	**.74**	**-.67**	**.074**
In this firm supervisors share knowledge with support staff	3.63	1.07	-.69	-.271
The firm encourages employees to utilize knowledge acquired to solve work related problems	3.92	.92	-.83	.584
The firm encourage employees to gain and share knowledge through learning and practice	3.96	.90	-.77	.347
Management recognizes and makes use of my abilities and skills	3.90	.87	-.69	.419
Employees are provided with an opportunity to learn on their jobs	4.04	.87	-.86	.833
Knowledge	**3.89**	**.67**	**-.68**	**.24**
The firm rewards employees for acquired knowledge and skills	3.36	1.09	-.37	-.625
I am satisfied with the pay I get from the organisation	2.94	1.27	.09	-1.115
The firm rewards every employee according to their work effort	3.28	1.11	-.21	-.689
The firm gives cash award for team performance periodically	3.36	1.09	-.29	-.587
Rewards	**3.31**	**.81**	**.01**	**-.772**
Employee Empowerment	**3.67**	**.60**	**-.43**	**-.174**

***Source**: Research Data, (2019)*

4.7.2 Descriptive Statistics Results for Employee Engagement

Majority of the respondents agree that they exert maximum effort while undertaking their tasks (Mean=3.74, SD=0.1.11). The respondent also agreed that they always look forward to coming to work (Mean=3.78, SD= 0.99). Mean=4.15, SD=0.78 agree

that they try their hardest to perform well on their job. Most of the employees at work, their mind is focused on their job (M=4.03, SD=90). Further, majority of the employees feel strong and vigorous at the place of work (M=3.90, SD=0.95).

The average (mean=3.90, SD=0.91) respondents agreed that they exert a lot of energy on their work. While others agreed that they feel happy when they work intensely (mean=3.81, SD=1.01). Most of the respondents always look for developmental opportunities that enhance the value of the organization (mean=4.03, SD=0.96). Mean=3.81, SD=1.01) of the respondents agree that it is difficult to detach themselves from their job.

In additional mean= 3.55, SD= 1.18 of the respondents agree that while working, they forget everything else around them. Most of the respondents find the work that they do meaningful and purposeful (M=4.15, SD=0.90). Finally, most of the respondents agree that they are proud of the work that they do.

Generally, results presented in Table 4.15 show that employee engagement crowned a mean of 3.90 which indicates that EE is a very important component within manufacturing firms. The standard deviations range from .78 to 1.18 with an overall SD of 0.63. The higher values of standard deviations showed the dispersion in a widely spread distribution. Hence, the measuring statements of the study variables are an approximation to a normal distribution. Further, values of the skewness and kurtosis as displayed in Table 4.15 are within the acceptable values; for skewness < 3 and kurtosis < 10 (Kline, 2005). This showed a normal distribution of the responses with respect to employee engagement within manufacturing firms, thus, suggests that the normality assumption as evidenced in the results appears not to be violated (Cohen, 2000).

Table 4.15: Employee engagement

n=384	Mean	Std. Dev	Skewness	Kurtosis
I exert maximum effort while undertaking my tasks	3.74	1.11	-.93	.22
I always look forward to coming to work	3.78	.99	-.79	.19
I try my hardest to perform well on my job	4.15	.78	-.97	1.54
At work, my mind is focused on my job	4.03	.90	-1.18	1.79
I feel strong and vigorous at the place of work.	3.90	.95	-.86	.60
I exert a lot of energy on my work.	3.90	.91	-.69	.31
I feel happy when I am working intensely.	3.81	1.01	-.87	.41
I always look for developmental opportunities that enhance the value of the organization.	4.03	.96	-.83	1.55
It is difficult to detach myself from my job	3.48	1.11	-.39	-.67
When I am working, I forget everything else around me.	3.55	1.18	-.55	-.58
I find the work that I do meaningful and purposeful.	4.15	.90	-1.39	2.26
I am proud of the work that I do.	4.21	.88	-1.31	2.00
EE	**3.90**	**.63**	**-.83**	**.86**

***Source**: Research Data, (2019)*

4.7.3 Descriptive Statistics Results for Leader Member Exchange

Employees in the manufacturing firm agreed that they feel their immediate supervisor understands their problems and needs (Mean=3.09, SD=0.850). This implies that employees in these organizations have effective supervisors who offer leadership, resolves conflicts and provides an ear for them. Again employees agreed that their immediate supervisor recognizes my potential (mean=3.47, SD=1.02). This is an implication that there is close working relationships with the supervisors manager.

Regardless of how much formal authority my immediate supervisor has in his position, he helps me to solve work related problems (Mean=3.60, SD=1.05). This implies that the managers have confidence in the employees, which boosts their morale and ability to learn new skills. Mean=3.57 and S.D=1.01 of the respondents do work for their supervisor that goes beyond what is specified in their job description.

Respondents agree that their supervisors are the kind of people one would like to have as a friend (Mean=3.60, SD=1.04). This is an implication that their supervisors are effective leaders who stay on the right course and can be trusted to make the right decision even if it is painful. Further most of the respondents are willing to apply extra efforts beyond those normally required to help their supervisor meet their work goals (M=3.85, S.D=0.93). The majority of the respondents respect their supervisor's knowledge and competence on the job (M=4.11, S.D=0.81).

In general, LMX gained a mean of 3.57 which indicates that it is very important component within manufacturing firms. The standard deviations range from 0.81 to 1.19 with an overall SD of 0.70. The higher values of standard deviations showed the dispersion in a widely spread distribution. Hence, the measuring statements of the study variables are an approximation to a normal distribution. Further, values of the skewness and kurtosis as displayed in Table 4.16 are within the acceptable values; for skewness < 3 and kurtosis < 10 (Kline, 2005). This showed a normal distribution of the responses with respect to employee engagement within manufacturing firms, thus, suggests that the normality assumption as evidenced in the results appears not to be violated (Cohen, 2000).

Table 4.16: Leader member exchange

n=384	Mean	Std. Dev	Skewness	Kurtosis
I feel that my immediate supervisor understands my problems and needs	3.09	1.16	-.07	-1.02
My immediate supervisor recognizes my potential	3.47	1.02	-.24	-.65
Regardless of how much formal authority my immediate supervisor has in his position, he helps me to solve work related problems	3.60	1.05	-.51	-.36
Regardless of the amount of formal authority my immediate supervisor has, I can count on him or her to "bail me out" at his or her expense when I really need it	3.27	1.19	-.27	-.88
I do work for my supervisor that goes beyond what is specified in my job description	3.57	1.01	-.36	-.57
My supervisor is the kind of person one would like to have as a friend.	3.60	1.04	-.42	-.50
I am willing to apply extra efforts beyond those normally required to help my supervisor meet his or her work goals.	3.85	.93	-.68	.26
I respect my supervisor's knowledge of and competence on the job.	4.11	.81	-1.12	2.05
LMX	**3.57**	**.70**	**-.19**	**-.66**

***Source**: Research Data, (2019)*

4.7.4 Descriptive Statistics Results for Innovative Work Behaviour

The results on IWB are presented in table 4.8. Basing on the findings, most of the respondents agree that they look for an opportunity to improve on existing products, process, technology and work relationships indicated by (mean = 3.890, SD = .893). Most of the respondents recognize opportunities to make a positive difference in their work, organization, department, and customers as indicated by (mean = 4.090, SD = .766). Majority of the respondents agree that they pay attention to non-routine issues in their work, department, and organization as indicated by (mean = 3.940, SD = .921).

In addition, most of the respondents search out for new work methods, techniques or instruments as shown by (mean = 4.080, SD = .804). Further, most of the respondents feel that they are good at finding new approaches of executing their tasks (mean =

4.060, SD = .816). In additional, most employees encourage key organization members to be enthusiastic about innovative ideas (mean = 4.050, SD = .867).

Further, most of the respondents agree that they attempt to convince people to support innovative ideas as given (M=4.080, SD=851). Majority of the respondents systematically introduce innovative ideas into work as indicated by (M=4.070, SD=0.858). Furthermore, most of the respondents contribute to implementation of new ideas as shown by (M=4.190, SD=0.816). Finally, most employees put effort into development of new things as indicated by (M=4.280, SD=0.726).

Generally, innovative worker behaviour culminated a mean of 4.073 which indicates that IWB is important within manufacturing firms. The standard deviations range from .726 to .921 with an overall SD of .559. The higher values of standard deviations showed the dispersion in a widely spread distribution. Hence, the measuring statements of the study variables are an approximation to a normal distribution. Further, values of the skewness and kurtosis as displayed in Table 4.17 are within the acceptable values; for skewness < 3 and kurtosis < 10 (Kline, 2005). This showed a normal distribution of the responses with respect to IWB within manufacturing firms, thus, suggests that the normality assumption as evidenced in the results appears not to be violated (Joanes & Gill, 1998).

Table 4.17: Innovative work behaviour

	Mean	Std	Skewness	Kurtosis
I look for an opportunity to improve on existing products, process, technology and work relationships	3.890	.893	-.823	.723
I recognize opportunities to make a positive difference in my work, organization, department and customers	4.090	.766	-.816	1.334
I pay attention to non-routine issues in my work, department and organization	3.940	.921	-1.076	1.382
I search out for new work methods, techniques or instruments	4.080	.804	-.809	.953
I feel that I am good at finding new approaches of executing my tasks	4.060	.816	-1.064	1.877
I encourage key organization members to be enthusiastic about innovative ideas	4.050	.867	-1.013	1.358
I attempt to convince people to support innovative ideas	4.080	.851	-1.106	1.746
I systematically introduce innovative ideas into work	4.070	.858	-1.002	1.282
I contribute to implementation of new ideas	4.190	.816	-1.261	2.522
I put effort into development of new things	4.280	.726	-.821	.682
IWB	**4.073**	**.559**	**-1.013**	**1.747**

***Source**: Research Data, (2019)*

4.8 Data Transformation

Prior to running the regression analysis, the measurements scales were transformed using arithmetic transformations for uniformity of values. It is pointed out that transformations improve chances of achieving normal distributions (Fox, 2019). Scores on items measuring each of the variables were summed, and then the sums divided by the number of items to achieve the mead score. Table 4.18 showed the results on data transformation. From the findings, IWB had the highest mean (4.07), followed by employee engagement (3.90), and followed by employee empowerment (3.79) while LMX had the lowest mean of (3.57). The standard deviations for all the variables were less than 1 indicating less variation in the responses. Finally, all independent variables and the dependent variable were normally distributed as shown in Table 4.18 below.

Table 4.18: Transformed descriptive statistics

n=384	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis
IWB	1.20	5.00	4.073	.559	-1.013	1.747
EMPNT	1.33	4.87	3.792	.635	-.542	-.153
ENGNT	1.08	5.00	3.895	.626	-.826	.857
LMX	1.75	5.00	3.572	.704	-.191	-.656

***Source**: Research Data, (2019)*

4.9 Correlation Results

Correlation analysis was conducted to test on the strength and extent of association between the study variables. In order to measure relationships between moderated mediation of LMX and employee engagement on the relationship between employee empowerment and employee IWB. The Pearson's correlation coefficient was therefore used to assess the degree to which quantitative constructs were linearly related (Nikolić *et al.* 2012). In addition, a stronger perfect correlation is obtained when the correlation coefficient (r) is found to be closer to either positive one (+1) or negative one (-1). Therefore, the correlation analysis was carried out using Pearson correlation coefficient technique.

From the results in table 4.19, there was a positive and significant correlation between independent variables and IWB. Particularly, the correlation results showed that employee empowerment had a positive and significant relationship with IWB (r =.510, ρ<.01). Therefore, there was an indication that there was 51% chance that employee empowerment increased with the increase in IWB. It was also shown that Employee engagement was positively significant correlated with IWB (r =.582, ρ<.01) which implies that there was 58.2% chance that employee engagement increased with the increase in IWB. Moreover, results indicated that a LMX

positively relates to IWB (r =512, ρ<.01) which implies that there was 51.2% chance of LMX increasing with increase in IWB.

Based on the above results, there was an indication of the linear relationship between all predictors on IWB within manufacturing firms, hence the need to perform a more sophisticated model such as multiple regression models to show a cause-effect relationship.

Table 4.19: Correlation results

	1	**2**	**3**	**4**
IWB	1			
Empowerment	.510**	1		
Engagement	.582**	.640**	1	
LMX	.512**	.635**	.549**	1

** Correlation is significant at the .01 level (2-tailed).
***Source**: Research Data, (2019)*

4.10 Test for Regression Assumptions

Assumptions of regression are essential for ensuring that the results obtained are actually representative of the sample in order to achieve the best results (Hair *et al*, 2010). The key assumptions tested were, linearity normality, homoscedasticity, multicollinearity and independence of variables before the regression analysis was conducted.

4.10.1 Linearity Test for the variables

Linearity of data refers to values of the outcome variable for each increment of a predictor variable which lie along a straight line (J. Hair et al., 2010). Linearity is an important association between the dependent variable and independent variables. Multiple linear regression can only accurately estimate the relationship between dependent and independent variable if the relationship is linear in nature (Osborne &

Waters, 2002). Absence of a linear relationship between independent variables and dependent variable can lead to the results of regression analyses to underestimate the true relationship. In this study Pearson Correlation was employed to determine that linear relationships existed between all the measures and found all independent variables significantly correlated to dependent variables. The results indicated a significant linear relationship between all the independent variables (employee empowerment, employee engagement and LMX) and dependent variable (IWB) as presented in Table 4.19 above.

4.10.2 Normality Test for the Variables

To test for normality, statistics estimating measures of shape, including skewness and kurtosis, were obtained and presented in Table 4.20. The rule of thumb is that a variable is reasonably close to normal if its skewness and kurtosis have values between -2 and +2 as recommended by (Hair et al., 2010).

Table 4.20: Normality

	Mean Statistic	SD Statistic	Skewness Statistic	Kurtosis Statistic
IWB	3.95	.723	-1.440	2.356
Empowerment	3.54	.595	-.562	-.177
Engagement	3.99	.645	-.862	.774
LMX	3.57	.739	-.240	-.518
Valid N(list-wise)	384			

***Source**: Research Data, (2019)*

4.10.3 Homoscedasticity

Homoscedasticity was assessed by plotting standardized residuals against standardized predicted values. A visual inspection of the plot of standardized residuals versus standardized predicted values (Fig 4.1) indicated that there was Homoscedasticity assumes equal error (residual) variance across all values of the independent variable (Kutner, Nachtsheim, Neter, & Li, 2005). This study employed

scatter plot in which the regression standard residuals for the independent variables (employee empowerment, employee engagement, and LMX were plotted against the dependent variable (IWB).

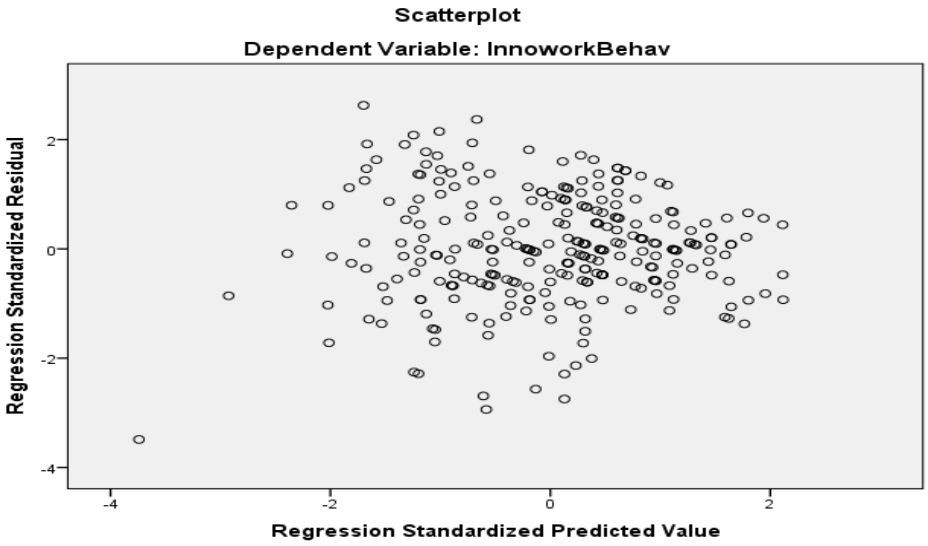


Figure 4.1: Homoscedasticity
***Source**: Research Data, (2019)*

4.10.4 Multicollinearity

Multicollinearity is the occurrence of the predictor variables being strongly correlated, such that it makes it difficult for one to determine the actual contribution of the respective predictor variables to the variance in the dependent variable (Zikmund *et al.,* 2013; Zhang *et al.,* 2011; Hair *et al.,* 2010). The multicollinearity was done by use of Variance Inflation Factor (VIF) and its reciprocal the tolerance values. Variance Inflation Factor (VIF) - the VIFs of the linear regression indicate the degree that the variances in the regression estimates are increased due to multicollinearity. VIF values higher than 10 indicate that multicollinearity is a problem. In addition, tolerance values of less than .2 indicates presence of multicollinearity. From the findings in Table 4.21, it was clear that the variables of this study did not produce multicollinearity problems, since the resulting tolerance

values varies in the range from .488 to .605. According to De Vaus (2002) if the tolerance value is greater than 0.2, it means this variable may not produce multi-collinearity. Furthermore, VIF results in table 4.20, which refer to the Variable Inflation factor, were ranging from 1.652 to 2.051, they do not indicate a problem with multicollinearity as VIFs are less than 10 (Hair *et al.*, 2010) or even less than 5 (De Vaus, 2002).

Table 4.21: Multicollinearity

	Collinearity Statistics	
Variable	**Tolerance**	**VIF**
Empowerment	.488	2.051
Engagement	.605	1.652
LMX	.587	1.7.5

***Source**: Research Data, (2019)*

4.10.5 Data Independence

Assumption of independence of observations was tested using the Durbin-Watson test. According to Fox (2016), the Durbin-Watson test is a 1st order autocorrelation which relates to correlation of errors of adjacent observations. Data independence was tested by the Durbin-Watson coefficient, which used studentized residuals. Garson, (2012), recommends that Durbin-Watson statistic was between 1.5 and 2.5 for independent observations. Table 4.22 below showed that Durbin-Watson statistics was 1.796 which confirms that all the research variables yielded Durbin-Watson values that were between the recommended value of 1.5 and 2.5 (Garson, 2012) and thus the residuals are not autocorrelated.

Table 4.22: Data independence

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.360[a]	.130	.123	.67674	2.063

a. Predictors: (Constant), Leader Member, Engagement, Empowerment
b. Dependent Variable: Innovative work Behaviour

***Source**: research data, (2019)*

4.11 Hypothesis Testing Results

Testing for hypothesis in this study was categorized in terms of direct, indirect, moderation and moderated-mediation hypothesis.

4.11.1 Results for Direct Effect

The purpose for testing direct hypothesis in this study was to achieve objectives 1, 2, 3, and 4 and also to verify H_{01}, H_{02}, H_{03} and H_{04}. Control variables were tested prior to testing direct effects. Hierarchical regression model was employed to establish statistical significant amount of variance on the Dependent Variable (DV) after accounting for all other variables. In this case, the researcher was interested in determining whether newly added variables contributed a significant improvement in R^2 (the proportion of explained variance in DV by the model).

4.11.1.1 Testing the Effect of Control Variables on the Dependent Variable

A test was conducted to assess the impact of the control variables on the dependent variable in order to know how the controls influenced the dependent variable. The findings presented in Table 4.22 revealed that 1.1% variation of IWB was predicted by gender, education, age, and experience ($R^2 = 0.011$). The joint prediction was not significant as shown by F value of 1.056, P> 0.05. None of the control variables significantly influenced IWB alone (Gender β=-.003, P=.960; Education β=.044, P>240; Age β=.030, P>.319; Experience β=.010, p>.780). Nonetheless, these were

just control variables and did not need to be causal, and so their coefficients do not necessarily have a causal interpretation. Table 4.23, M1 below showed the effect of control variables.

4.11.1.2 H_{01}: Employee Empowerment has no direct significant effect on Innovative Work Behaviour

A regression test to determine the effect of both control and independent variable (direct effect) was done. The regression results presented in Table 4.23 indicated that 26.1 percent of variance in IWB was explained by control variables and employee empowerment (R^2=0.261). The overall model was statistically significant (F=127.990, P<.0.05). The beta coefficients revealed that the influence of employee empowerment on IWB was positive and statistically significance (β=0.452, P<0.05). This suggests that one unit change in employee empowerment is associated with 0.452 change in Innovative work behaviour. The findings further revealed a significant ΔR^2 =.250 which implies that employee empowerment explain 25% of the variance in IWB while holding constant the control variables. Since the results indicate that employee empowerment positively influences IWB, hypothesis H_{01} was not supported.

4.11.1.3 H_{02}: Employee Engagement has no direct significant effect on Innovative Work Behaviour.

A regression test to determine the effect of both control, employee empowerment (independent variable) and employee engagement (mediator) was done. The regression results presented in Table 4.23 unveiled that 37.3 percent of variance in IWB was explained by control variables, employee empowerment and employee engagement (R^2=0.373). The overall model was statistically significant (F=67.069,

P<.0.05). The beta coefficients indicated that the influence of employee engagement on IWB was positive and statistically significance (β=0.391, P<0.05). This suggests that one unit change in employee engagement is associated with 0.391 changes in Innovative work behaviour. The findings further revealed a significant ΔR^2 =.112 which implies that employee engagement explain 11.2% of the variance in IWB while holding constant the control variables and employee empowerment. Since the results indicate that employee engagement positively influences IWB, hypothesis H_{02} was not supported.

4.11.1.4 $H0_3$: Leader Member Exchange has no direct significant effect on Innovative Work Behaviour

A regression test to determine the effect of control variables, employee empowerment (independent variable) employee engagement (mediator) and LMX (moderator) was done. The regression results presented in Table 4.23 indicated that 40.3 percent of variance in IWB was explained by control variables, employee empowerment, employee engagement and LMX (R^2=0.403). The overall model was statistically significant (F=19.348, P<.0.05). The beta coefficients indicated that the influence of LMX on IWB was statistically significance (β=0.188, P<0.05). This suggests that one unit change in LMX is associated with 0.188 changes in Innovative work behaviour. The findings further revealed a significant ΔR^2 =0.031 which implies that LMX explain 3.1% of the variance in IWB while holding constant the control variables, employee empowerment and employee engagement. Hence, hypothesis H_{03} was not supported.

Table 4.23: Direct effect control variables, H1, H2, H3

	Innovative Work Behaviour							
Variable	*β(M1)*	*p*	*β(M2)*	*p*	*β(M3)*	*p*	*β(M4)*	*p*
Gender	-.003	.960	-.011	.830	.014	.570	.000	.993
Education	.044	.240	.021	.520	.007	.676	-.002	.939
Age	.030	.319	-.009	.747	-.020	.560	-.029	.235
Experience	.010	.780	-.012	.678	-.004	.296	-.007	.800
Empowerment			.452***	.000	.210***	.000	.114**	.027
Engagement					.391***	.000	.341***	.000
LMX							.188***	.000
R^2	.011		.261		.373		.403	
ΔR^2	.011		.250		.112		.031	
F	1.056	.378	127.990***	.000	67.069***	.000	19.348***	.000

Note ***P=001, LMX= Leader Member Exchange

***Source**: Research data 2019*

4.11.1.5 H_{04}: Employee Empowerment has no significant direct effect on Employee Engagement

A regression test to determine the effect of both control and employee empowerment (independent variable) was done. The regression results presented in Table 4.24 showed that 45 percent of variance in employee engagement was explained by control variables, employee empowerment (R^2=0.450). The overall model was statistically significant (F=96.185, P<.0.05). The beta coefficients indicated that the influence of employee empowerment on employee engagement was statistically significance (β=0.507, P<0.05). This suggests that one unit change in employee engagement is associated with 0.507 changes in employee engagement. The findings further revealed a significant ΔR^2 =0.140 which implies that employee engagement explain 14% of the variance in employee engagement while holding constant the control variables and LMX. The results conclude that employee empowerment positively influence employee engagement. Hence, the hypothesis H_{04} was not supported.

Table 4.24: Direct effect for H4

	Employee Engagement			
Variable	***B(M5)***	***p***	***B(M6)***	***P***
Gender	-.086	.120	-.081	.101
Education	.021	.539	.020	.516
Age	.029	.309	.027	.299
Experience	-.010	.755	-.030	.307
LMX	.477***	.000	.205***	.000
Empowerment			.507***	.000
R2	.310		.450	
ΔR2	.268		.140	
F	147.043***	.000	96.185***	.000

Note: P<0.01***

Source*: Research Data, (2019)*

4.11.2 Results for Indirect Effect

H_{05}: ***Employee engagement has no significant mediating effect on the relationship between employee empowerment and innovative work behaviour*****.**

The purpose for testing the hypothesized mediation was to address H_{05} which states that employee engagement has no mediation effect on the relationship between employee empowerment and IWB in this study. The findings are presented in Table 4.25 below. Bootstrapping procedure was followed by testing the indirect effect according to the recommendations of (Hayes & Preacher, 2014); MacKinnon (2012). The procedure required that:

Step 1: The first condition required that employee empowerment (IV) significantly predict employee engagement (M) as seen in Table 4.25.

Step 2: The second condition required that employee engagement (mediator) significantly predict IWB (DV).

Step3: The third condition required that employee empowerment (IV) significantly predict innovative work behaviour (DV).

Step 4: The fourth condition required a significant coefficient for the indirect path between employee empowerment and innovative work behaviour through employee engagement. The bias-corrected percentile bootstrap method determines whether the last condition is satisfied

Table 4.25 and figure 4.2 indicated the results of multiple regression analysis using Hayes (2018) PROCESS Macro v3.2 (Model 4). The results revealed that, in the first step employee empowerment significantly affected employee engagement coeff= .654, $p < .000$ (Table 4.25, Model 1) with the model explaining 41.9% of variance (R^2 =0.419) with all control variables being insignificant.

Step two, employee engagement was found to be significantly associated with innovative work behaviour with coeff = 0.398, $p < .000$ (Table 4.25, Model 2) with the model accounting for 36.9% of variance (R^2 =0.369) with all control variables being insignificant.

To determine the results for step three while controlling for employee engagement, the same model 2 was used. Results revealed that employee empowerment was positive and significantly associated with innovative work behaviour with coeff=.209, P<.000) thus condition three for mediation to occur was also met.

Finally, results for the bias-corrected percentile bootstrap method indicated that the indirect effect of employee empowerment and innovative work behaviour through employee engagement was significant, $a_1 \times b_1$coeff.= .260, SE = .045, 95% CI = [.178, .355]. These results indicated a partial mediation. Partial mediation occurred since direct effect was significantly different from zero, there was still a remaining relationship between employee empowerment and IWB and so the mediator (employee engagement) only partially explains the relationship between employee

empowerment and IWB. In addition the results revealed a total effect = C'+(a_1*b_1) of the study findings with employee empowerment having coeff .209+(a*b).260 =.469, p<.001. Results of the covariates indicated were all not significant. Based on these results H_{05} was not supported.

Table 4.25: Testing for Mediation

	Model 1 (EE)		**Model 2 (IWB**		**Model 3(IWB) Total effect**	
	coeff	**t**	**Coeff**	**t**	**coeff**	**t**
Constant	1.440	7.936	1.787	9.775	2.360	12.839
Empowerment	a=.654**	15.690	C'=.209***	4.179	.469	11.106
Engagement			b=.398***	8.290		
Gender	-.071	-1.401	.013	.788	-.016	-.302
Education	.032	.997	.006	.829	.019	.590
Age	.040	1.529	-.016	.514	.000	-.003
Experience	-.030	-1.011	-.007	.808	-.019	-.621
R-sq	.419		.369			
F	54.616**		36.790**			
P-V	.000		.000			
Indirect effect(s) of X on Y: mediation effect						
	Effect	BootSE	LLCI	ULCI		
Mediation (a1×b1)	.260	.045	.178	.355		

***Source**: Research Data, (2019)*

Employee empowerment is the independent variable in this diagram (Fig 4.2) and employee engagement represents the mediator variable while IWB is the dependent variable. This depicts a causal sequence in which employee empowerment indirectly affects IWB through the engagement of employees. This indirect influence is the process by which employee empowerment transmits its influence on IWB. According to the model, employee empowerment can also directly affect employee engagement the direct effect of employee empowerment irrespective of the influence of employee engagement on IWB (Hayes & Preacher, 2014).

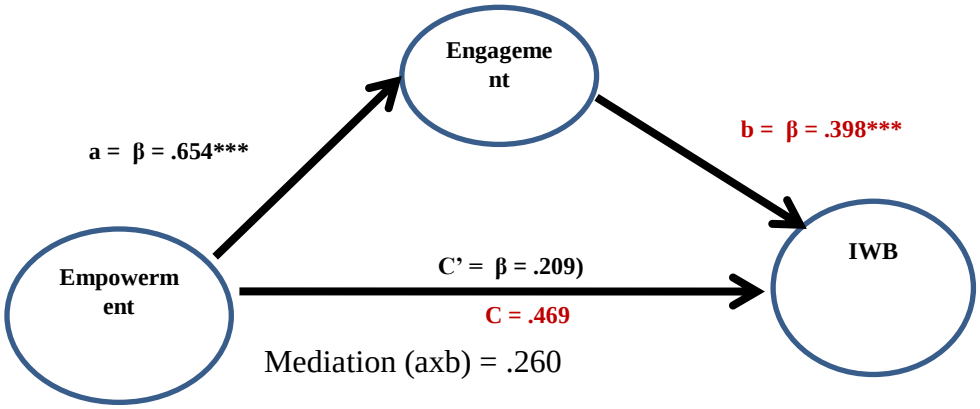


Figure 4.2: Conceptual model of simple mediation

Source: Hayes and Preacher (2014)

4.11.3 Results for Moderation

The purpose for conducting test for moderation effect was to address H_{06} and H_{07} which are hypothesized that LMX has no significant moderating effect on the relationship between employee empowerment and employee engagement. The conditional process analysis employed Hayes (2018) process macro v3.2 (model 58).

H_{06}: Leader-member exchange has no significant moderating effect on the relationship between employee empowerment and employee engagement.

The sixth objective of the study was to establish the moderating effect of LMX on the relationship between employee empowerment and employee engagement. Multiple regression analysis was used to test for moderation using Hayes (2018) process Macro v3.2 (Model 58). In this model, control variables, employee empowerment and employee engagement were entered.

The model depicted in table 4.26 revealed R-squared of 0.450 indicating that it accounted 45% of the total variance on IWB with which was statistically significant (F=43.996, P<.000). All the control variables were included in the model. The results revealed they were all insignificant. The results in table 4.26 showed that the employee empowerment had a direct and positive significance effect on employee

engagement with coeff .489,CI=.389,.588. Results further showed that LMX had a positive significant effect on employee engagement with coeff .231, CI .132,.330. Conversely, LMX (moderator) does not have a significant effect on the relationship between employee empowerment on the employee engagement (mediator) (β= .000, CI=-.067, .068). Therefore H_{06} was supported.

Table 4.26: Moderating effect of LMX on the relationship between Empowerment and Engagement

	Employee Engagement					
Variable	**β**	**SE**	***T***	***p***	**LLCI**	**ULCI**
Constant	.046	.197	.234	.815	-.342	.434
ZEmpowerment	.489***	.051	9.662	.000	.398	.588
ZLMX	.231***	.050	4.579	.000	.132	.330
Interaction (Emp × LMX)	.000	.034	.005	.996	-.067	.068
Gender	-.130	.080	-1.635	.103	-.286	.026
Education	.032	.050	.650	.516	-.066	.130
Age	-.043	.041	1.038	.300	-.038	.123
Experience	-.047	.046	-1.019	.309	-.138	.044
R^2	.450					
ΔR^2	.000					
F	43.966***					

NB: ****p* <.000

***Source**: Research Data, (2019)*

To better understand the nature of the interaction between LMX and employee empowerment and employee engagement, moderated findings are presented on a moderation graph as suggested by (Dawson, 2014), who proposed that it is not possible to conclude that interaction has occurred without probing the nature of that interaction at different levels of moderator.

The findings presented in figure 4.3, revealed that LMX had no statistical significance effect on the relationship between employee empowerment and employee engagement. In the plot below, the lines are parallel. This suggests there was no

interaction effect, based on LMX. The empowerment and LMX have the same effect on engagement.

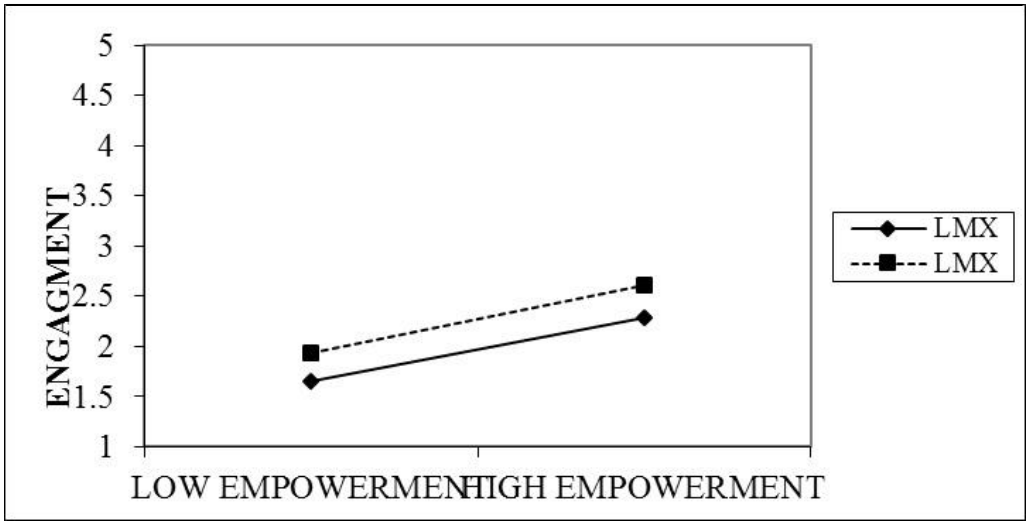


Figure 4.3: Modgraph for LMX on Empowerment and Engagement
***Source**: Research Data, (2019)*

H_{o7}: Leader-member exchange has no significant moderating effect on the relationship between employee engagement and innovative work behaviour in manufacturing firms in Nairobi.

Hypothesis seven sought to test whether LMX moderates the relationship between employee engagement and IWB.

The results in table 4.27 revealed that the overall model explained 41.3% of the total variance, with R-squared of 0.413 which was positive and statistically significant (F=32.940, P<0.05). All control variables were included in the model and the results showed they were all not significant. Further, the results showed that effect of employee engagement on IWB was statistically significant with coeff .348, CI=.239, .457). The results further indicated that LMX had a direct significant effect on IWB with coeff= .245, CI=139, 350. Most importantly the results revealed that the LMX had a significant moderating effect on the relationship between employee engagement

(mediator) and IWB coff=-.093, CI=-.161, -.025. Based on the above findings, this hypothesis was therefore not supported.

Table 4.27: Moderating effect of LMX on the relationship between Engagement and IWB

	IWB					
Variable	**B**	**SE**	***t***	***p***	**LLCI**	**ULCI**
Constant	.207	.204	1.014	.311	-.195	.609
ZEmpower	.120*	.058	2.075	.039	.006	.234
ZEngagement	.348***	.056	6.273	.000	.239	.457
ZLMX	.245***	.054	4.561	.000	.139	.350
Interaction (LMX × Eng)	**-.093****	**.035**	**-2.685**	**.008**	**-.161**	**-.025**
Gender	.004	.082	.047	.962	-.158	.166
Education	-.005	.052	-.089	.929	-.106	.097
Age	-.041	.043	-.951	.342	-.124	.043
Experience	-.013	.048	-.267	.789	-.107	.081
R^2	.413					
ΔR^2	.011					
F	32.940***					

NB: *p < .05, ***p <.001,

***Source**: Research Data, (2019)*

To interpret the results of moderating effect of LMX on the relationship between employee engagement and IWB, it was necessary to plot a moderated graph as recommended by Aguinis and Gottfredson (2010), Dawson (2014), and Hayes (2013) to conclude that interaction effect. Further, they indicated that it is insufficient to conclude there is interaction without proving the nature of interaction. Therefore, the significance of LMX was tested at a low and high level of engagement and IWB.

The findings in figure 4.4 below indicate an antagonistic moderating effect. These results revealed that at low level of LMX, innovative work behaviour increases with increase in employee engagement and at the higher levels of LMX, change in IWB is negligible with increase in employee engagement. For LMX, the interaction was significant and showed that LMX is positively related to IWB when engagement is high. At the same time, the results show that employees indeed react to high LMX by

focusing on IWB independently on whether they have high or low relationships with their supervisors.

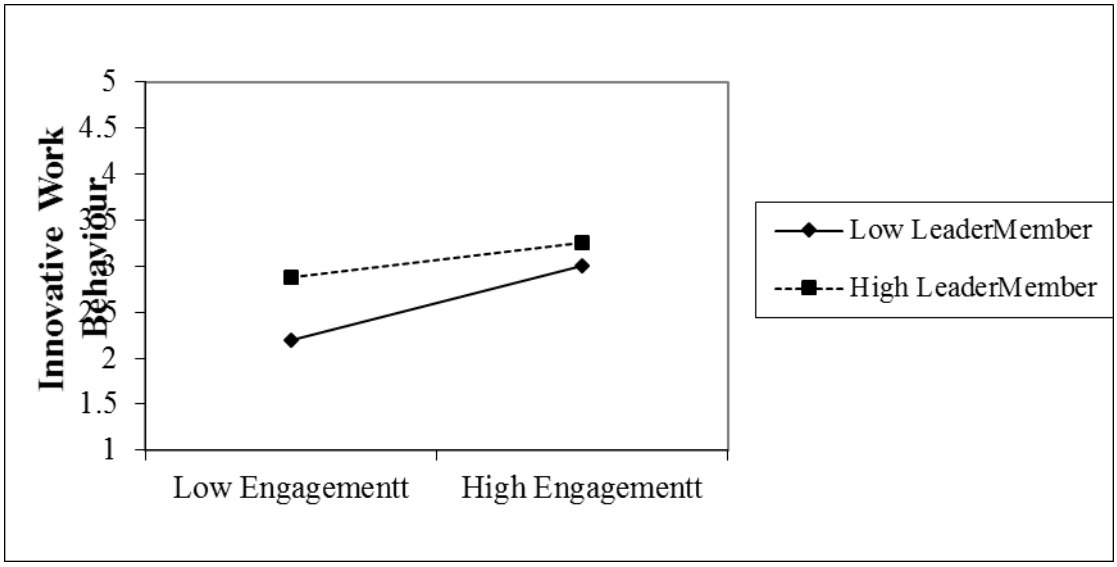


Figure 4.4: Modgraph for LMX on EE and IWB
***Source**: Research Data, (2019)*

4.11.4 Results for moderated mediation

H_{o8}: ***Leader-member exchange has no significant moderating effect on the indirect effect and relationship between employee empowerment and innovative work behaviour through employee engagement in manufacturing firms in Nairobi.***

To validate the findings on the moderated mediation relationship for Hypothesis eight, SPSS Process macro was employed to examine the varying magnitude of conditional indirect effect of employee empowerment on IWB across different levels of LMX.

Table 4.28 indicate that moderated mediation was significant lower, middle, and upper levels of LMX, however, it is much stronger at a lower level of LMX level (95% bootstrap, Effect=.223, CI=.109,.331), than at the upper level (95% bootstrap,

Effect= .123, CI=.040,.233). Since both the confidence intervals have none zeros, hypothesis (H_{08}) was not supported.

Table 4.28: Moderated mediation results

ZEmpowerment		⟶ ZEngagement ⟶		ZIWB
ZLMX	Effect	BootSE	BootLLCI	BootULCI
-1.168	.223	.057	.109	.331
.074	.167	.037	.098	.241
1.033	.123	.049	.040	.233

Note: *CI = 95% confidence interval for the indirect effect: if CI does not include zero, the indirect effect is considered statistically significant. LMX=Leader Member Exchange, IWB= Innovative work behaviour*

***Source**: Research Data, (2019)*

To make it easier to interpret the results, it is always useful to plot the moderating effect effects (Aguinis and Gottfredson, 2010, Dawson, 2014, Hayes, 2013b). Graphical representations of the moderated mediation were produced using Hayes approach (2013b). This involved tracing a simple straight line (y=ax+b) that corresponds to a linear function which establishes a link between the indirect effect and the moderator. The findings depicted in figure 4.5 shows that the conditional indirect effect of employee empowerment on innovative work behaviour at the values of LMX decreases with increase in LMX.

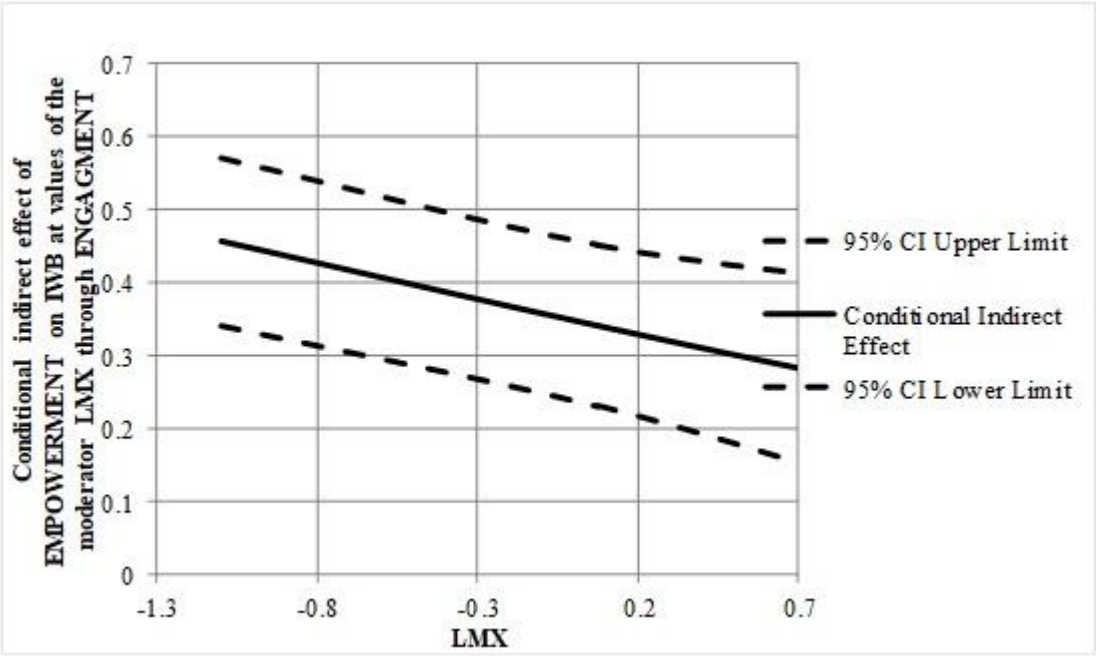


Figure 4.5: Modgraph for conditional indirect effect of empowerment on IWB at values of the moderator (LMX) through employee engagement

***Source**: Research Data, (2019)*

4.11.5 Statistical Results for Model 58

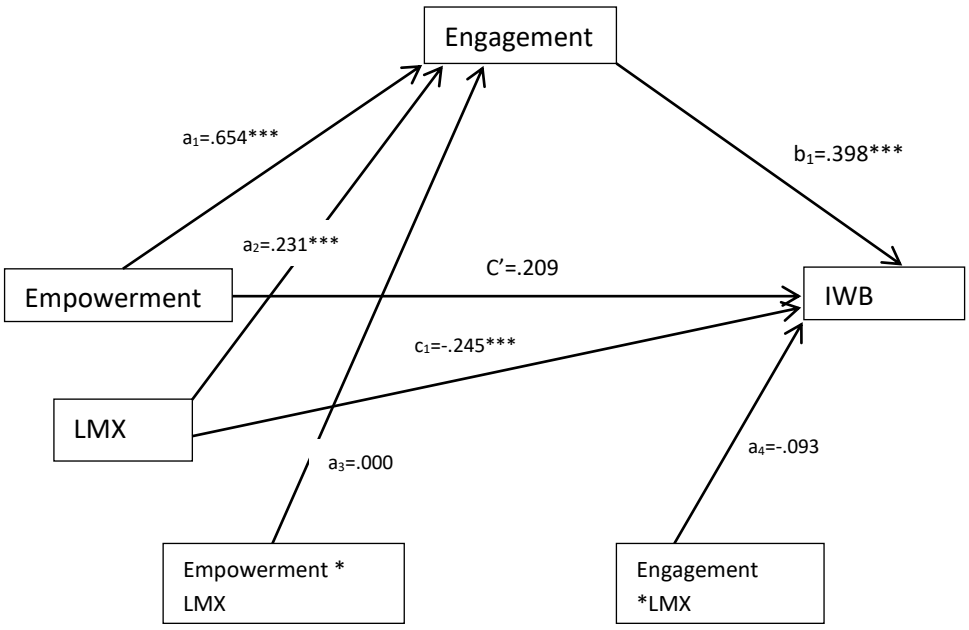


Figure 4.6: Statistical Model

Source: Hayes and Preacher (2014)

4.12 Summary of Hypothesized test results

This section presents a tabulation of summary of the hypothesis testing results that guided the study.

Table 4.29: Summary table of hypothesis

Hypothesis	β	P	LLCI	ULCI	Decision
H_{01}: Employee empowerment has no direct significant effect on innovative work behaviour.	.452	.000			Rejected
H_{02}: employee engagement has no significant direct effect on innovative work behaviour.	.391	.000			Rejected
H_{03}:Leader member exchange has no significant direct effect on innovative work behaviour	.188	.000			Rejected
H_{04}:Employee empowerment has no significant direct effect on employee engagement	.507	.000			Rejected
H_{05}:Employee engagement has no significant mediating effect on the relationship between employee empowerment and innovative work behaviour	.260	-	.178	.355	Rejected
H_{06}:Leader-member exchange has no significant moderating effect on the relationship between employee empowerment and employee engagement	.000	.996	-.067	.068	Accepted
H_{07}: Leader-member exchange has no significant moderating effect on the relationship between employee engagement and innovative work behaviour	-.093	.008	-.161	-.025	Rejected
H_{08}: Leader-member exchange has no significant moderating effect on the indirect effect on the relationship between employee empowerment and innovative work behaviour through employee engagement	.223 .123		.109 .040	.331 .233	Rejected

***Source**: Research Data, (2019)*

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

The current study examined the moderating influence of leader-member exchange on the indirect relationship between employee empowerment and innovative work behaviour through employee engagement among employees drawn from manufacturing firms in industrial area, Nairobi City County. The basic tenet was to explore the contributions that the interactions between employees and supervisors or immediate firm leadership make upon the already established interrelationships between employee empowerment, employee engagement and innovative work behaviour. This chapter therefore provides insight on the main finding of the study, together with findings in respect related to the eight objectives of the study; conclusions thereof, and contribution to knowledge, implications for theory, practice, policy and recommendations.

5.1 Summary Research Findings

The main finding of the current study and which reflects the researchers arguments was that, the indirect effect between employee empowerment and innovative work behaviour among employees in manufacturing firms in Nairobi, via their engagement is moderated by the degree of leader-member exchange between employees' and their immediate leaders. Prior to this argument, a number of specific findings were made in line with the specific objectives as summarized in the sections below:-

5.1.1 Employee Empowerment and Innovative Work Behaviour

The first objective of the study was to evaluate the effect of employee empowerment on IWB in manufacturing firms in Kenya. The study predicted that employee

empowerment has no significant effect on IWB. The findings indicated that employee empowerment on IWB was statistically significant (β=.452, P< .000). The β value suggests that one unit change in Employee empowerment was associated with .452 change in IWB. It would seem that by according employees power, rewards, information and knowledge, manufacturing firms operating within the industrial area are keen to motivate employees by giving them confidence to perform their tasks. It has been shown that empowered employees have more power, autonomy and control over their work, requiring management to provide resources and training that can sustain empowerment among them (Saif & Saleh, 2013). Indeed, empowering employees through participative decision making and autonomy is a step in the right direction taken by manufacturing firms under study, and reflects findings which have previously shown that increased autonomy allows employees to influence processes (Tremblay & Genin, 2008). Similarly, by encouraging participative decision making, manufacturing firms in the industrial area are keen to decentralize decision making which in turn, builds confidence, discretion and responsibility among employees (Sahoo et al., 2010).

The findings are consistent with recommendations by Nusrat (2018), who observes that knowledge should be shared among staff in order to maximize employee contribution. Nusrat (2018) further vouches for the importance of rewards noting, that when employees are appreciated, they are likely to be more committed and engaged in their work. Suffice it to say therefore, that manufacturing firms in industrial area have done what it takes to empower employees, which perhaps explains why there is a concentration of firms and employees in that area of Nairobi City County.

The findings provide sufficient evidence to support the effect of employee empowerment on innovative work behaviour of employees. This is consistent with Alkhodary (2016), argument that employee empowerment was an effective antecedent of individual IWB, and established that employee empowerment significantly influence attitude of employees and behaviour at the workplace. Kahreh et al. (2011), similarly found a positive relationship between employee empowerment and employee IWB. Evidence show that when empowerment is embedded in the work with emphasis to training and development, reward, job security, encouraged open communication in the group, it allows employees to make decisions, stimulated them to unleash their potential and provide them with autonomy and the chance to voice Bos-Nehles et al. (2017); (Celik et al., 2014; Ramesh & Kumar, 2014)

It is apparent from the findings made that the practice of innovative work behaviour in manufacturing firms in Nairobi Kenya, particularly in the industrial area gets a boost through empowerment of employees that sees them be recognized and given the power and autonomy they need in their tasks. This has made the industrial area to be a beehive of activities ranging from chemical to textiles. Indeed other firms in Kenya have recognized the critical role that employee empowerment plays in innovativeness. Commercial banks in Kenya for instance, in recognition of the need to empower employees have put in place policies on employee empowerment that includes employee training, participative decision making, meritorious rewarding, and contingent policy making (Kirubi, 2014). The public service in Kenya on the other hand encourages teamwork as an empowerment approach (Kelemba, Chepkilot, & Zakayo, 2017).

5.1.2 Employee Engagement and Innovative Work Behaviour

The second objective of the study was to assess the effect of employee engagement in IWB in manufacturing firms in Kenya. The study predicted that employee engagement had no significant effect on IWB. The results revealed that there was a positive and statistically significant effect on the relationship between employee engagement and IWB (β=.391, P<.001). The β value suggests that one unit change in Employee engagement is associated with .391 change in IWB.

This is indeed consistent with previous studies which have characterized employee engagement as a structure that builds on emotional, behavioural and cognitive components as well as, affective attachment (Abraham, 2012; Shuck *et al.,* 2011; McEwen, 2011). The behavioural and emotional engagement extended to employees in the manufacturing firms has seemingly impacted positively on their attitude values and commitment towards their work as depicted by the descriptive analysis results which portrayed a happy force.

The implication of these findings is that the beehive of activities witnessed in manufacturing firms operating in the industrial area could be explained by an increase in productivity among employees occasioned by their engagement. This is in line with arguments made by Abraham (2012) in pointing out that engagement of employees leads to optimistic behaviours and attitudes which reinforces and stimulates their interest and productivity. It is also clear from the descriptive analysis results that employees go about their work with enthusiasm. This supports views by Harter *et al.,* (2003) that when employees are fully engaged in assigned tasks, they show enthusiasm and satisfaction in doing them. The commitment exhibited by employees in manufacturing firms in the industrial area is perhaps associated with the

feeling of being engaged. (Nienaber & Martins, 2014b) posit that organizational commitment and job involvement are constructs that relate positively with work engagement.

The results also tallied with Shalley et al. (2004), who found that highly engaged employees were more likely to express innovative behaviours than low engaged. Thus, engaged collaborators have more available personal resources to be involved in innovative behaviours. Similarly, the results support the findings of (De Spiegelaere et al., 2015; Kim & Koo, 2017a) who found that Job engagement had positive influence on organisation engagement and innovative behaviour. The findings revealed a significant relationship between work engagement and IWB. Further, Vithayaporn and Ashton (2019) conducted a study in Thai Airways International on Employee Engagement and IWB which found that engagement and innovation support each other and that engaged employee are likely to be more innovation in their work place. It is evident that when employees are engaged, they in turn become active in their day-to-day activities of the organisation. This shows that employees who are engaged become dedicated and pay attention to innovative ideas, look for ways of improving services and products, search for new methods of doing work, and convincing their colleagues to support innovative ideas at the work place.

These results confirm that manufacturing firms in Nairobi are benefiting from innovative work behaviour that focuses on idea exploration and idea generation. This is a positive move considering that the Kenyan government and firms have been urged to embrace innovation in order to spur innovativeness in manufacturing (Yinghun, 2018). According to a report generated by the Overseas Development Institute (ODI) together with the Kenya Association of Manufacturers (KAM),

Innovative technologies such as robotics and artificial intelligence are critical to the manufacturing sector in this digital era. Besides, the finding showing that employee engagement has had a positive impact on innovative work behaviour in manufacturing firms in Nairobi reflects previous studies which were conducted elsewhere, lending credence to the fact that engaging employees is a critical aspect in innovativeness.

Park *et al.,* (2014) for instance, argue that employee engagement is likely to shape employees perception of their work and by extension their level of innovative behaviour. Similarly, Vithayaporn and Ashton (2019) contend that engagement and innovation have a contingent relationship when viewed from an Airways perspective. The point made here is that employee engagement can boost the efforts of employee empowerment in seeking to increase innovative work behaviour.

5.1.3 Leader–Member Exchange and Innovative Work Behaviour

The third objective was to examine the effect of LMX on IWB which was hypothesized that LMX has no significant effect on IWB. The results confirmed that LMX positively and significantly affected IWB which was (β=.188, P<.001). The β value suggests that one unit change in Employee engagement is associated with .188 changes in IWB.

This characterization is consistent with previous studies which have pointed out that formal contractual relations involve an exchange of basic resources and economic needs. On the contrary informal contractual relations concern trust and rewards and special treatment (Henderson *et al.,* 2009; Wayne *et al.* 2002). Existence of these forms of leader-member exchange relations is indeed a plus for the firms since evidence showed that such relations nurture emotional support, trust, better

interactions and higher responsibilities (Dulebohn *et al.*, 2012). In this way, both the firms and employees benefit mutually.

These findings confirm that manufacturing firms in Nairobi are desirous of getting the best out of employees by nurturing symbiotic relationships of a mutual nature. Such relationships no doubt go a long way in stimulating innovative behaviour among employees. The findings are consistent with findings by Jarissen and Van Ypeten (2014) showing that supervisor support directly influences innovative behaviour. On this basis, it can be argued that the amount of support employees in manufacturing firms in Nairobi receive from supervisors motivates them to be innovative. On the other hand supervisors are able to achieve set targets owing to the willingness of employees to help out in the realization of those targets.

The findings of this study support the results of meta-analysis that examined the relationship between LMX relationship quality and a multidimensional model of work performance which was reported to be statistically significant (Martin et al., 2016). These findings are consistent with a study of Breevaart et al. (2015) on Dutch police officers in Netherlands which confirmed that employees in high-quality LMX relationships and in a more resourceful work environment were reported to have more developmental opportunities. From the finding of this study it is evident that LMX is related to IWB. This means that employees who perceive a fair balance between supervisor's encouragements relative to their work efforts will respond with more innovative behaviour.

The findings of this study agree with other studies which show that the quality leader-member exchange relationships founded on mutual respect, obligation and trust impacts positively and significantly on IWB across a diversity of sectors (Alsughayir,

2017; Kim & Koo, 2017; Yeoh & Mahmood, 2013). Viewed in this way, it is not difficult to conclude that innovative work behaviour in manufacturing firms in Nairobi is greatly contributed by the existing exchange relationship between employees and their supervisors.

5.1.4 Employee Empowerment and Employee Engagement

The fourth objective sought to determine the effect of employee empowerment on employee engagement. The results revealed that the effect of employee empowerment on employee engagement was positive and statistically significant (β=.507, P<.001). The β value suggests that one unit change in Employee engagement is associated with .507 changes in employee engagement.

Findings from this study confirm that when employees are trained, rewarded, and information is shared, they feel more appreciated and eventually become more engaged in their job. The style of empowering employees in the organisation helps to draw out the best from them by motivating and inspiring employees to work towards the organizational goals. Infact, employee empowerment has featured in the discourse on empowerment, and has been shown to be the most influential factor in lower cadre empowerment (Ugwu *et al.* 2014). It is therefore not difficult to conclude that manufacturing firms in Nairobi's industrial area are benefiting from the engagement shown by empowered employees.

This findings support the work of Popli and Rizvi (2016) that was done across the service sector in the Delhi National Capital Region (NCR) on drivers of employee engagement which found that transformational leadership style had a positive relationship with employee engagement. This means that those HR practices that foster engagement need to be embraced in the organisation. Furthermore, Dajani

(2015), conducted a study on employees from private and public bank in Cairo-Egypt which assessed the impact of leadership and organizational justice, compensations, work practice and procedures, training, and development for being key determinants of employee engagement from the employees. The result confirmed that leadership style and organizational justice had positive significance with employee engagement. These findings are also consistent with the studies of (Albrecht & Andreetta, 2011; Ugwu et al., 2014), that claimed employee empowerment is positively related to organizational citizenship behaviour, job satisfaction, and performance.

The finding showing that employee empowerment in manufacturing firms in Nairobi positively and significantly predicts employee engagement augers well for the firms in question, which stand to benefit in terms of longevity. Zaunol *et al.*, (2016) have previously noted that non engagement of employees may lead to collapse of companies. Consequently, by engaging employees through empowerment, manufacturing firms in Nairobi are bound to avoid such a collapse. Moreover, Stander and Rothma (2010) have demonstrated that employee empowerment makes employees feel secure at work and therefore become fully engaged and more committed to the tasks. It would seem that employees of manufacturing firms under study have job security arising from the psychological empowerment and are apt to perform at higher levels.

5.1.5 Mediating Influence of Employee Engagement

The fifth objective was to examine indirect effect of employee empowerment on IWB through employee engagement. The findings confirm that employee engagement fully mediated the relationship between employee empowerment and IWB. A procedure suggested by (Hayes & Preacher, 2014); Preacher and Hayes (2008), was then used to

test the significance of the indirect effect, and we found a positive and significant indirect relationship between the employee empowerment and IWB through employee engagement (a_1xb_1 coeff.=260, SE.045,95%CI [.178, .355], The overall model was statistically significant (F=54.616, P<.05). The results provided sufficient evidence to support partial mediation of employee engagement on the relationship between employee empowerment and IWB.

The findings of the this study are consistent previous study that was carried out from Romanian hotel employees testing the effect of employee engagement as a mediator on the effects of high Performance work practices on job performance and extra-role customer service (Karatepe, 2013), which revealed a partial mediation. On the other hand, the results of this study are contrary with the study of Christian et al. (2011) who carried out quantitative review showing support for employee engagement as a mediator in the relation to job resources and performance which found that employee engagement fully mediated these relationships. Further, the work of Itam and Singh (2017), on a study conducted on front line service employees of organized retail stores in South India confirmed that employee engagement has a full mediation effect on internal branding practices and outcome variables.

Perhaps a major contribution to theory and practice that emerges from this study, is to show the mediation ability of employee engagement in the relationship between employee empowerment and innovative work behaviour. Previous studies have either looked at direct effects of employee empowerment on employee engagement (Nawaz *et al.,* 2014; Shalley, *et al.,* 2004), or direct effects of employee engagement on firm performance (Anderson *et al.,* 2014; Bakker & Bal. 2010; Christian *et al.,* 2011); Karatepe, 2013; Li *et al.,* 2012). The few studies showing indirect links involving

employee engagement mainly use performance as the response variable as opposed to innovative behaviour. Moreover, none of them uses employee empowerment as the explanatory variable (Salanova *et al.,* 2005; Michael *et al.,* 2006).

The current study therefore provides an avenue through which both employee empowerment and engagement could be exploited to make manufacturing firms to be more innovative oriented in both their processes and products. This is particularly necessary following the dynamism in the business environment and the challenges occasioned by the Covid-19 pandemic. Moreover, the finding showing that employee empowerment is mediated by employee engagement is best reflected in the thoughts of Lara and Stephanie (2009), which postulated that companies which do not treat their employees well during a crisis will face lowered employee engagement and will in turn suffer employee turnover. The finding showing that employee empowerment (treating employees well) and innovative behaviour is boosted by employee engagement is therefore critical to the survival of manufacturing firms particularly during this time of the COVID–19 pandemic.

5.1.6 Moderating Effect of Leader–Member Exchange on Employee Empowerment and Engagement

The sixth objective was to establish moderating effect of LMX on the relationship between employee empowerment and employee engagement. The results revealed that the effect of employee empowerment on engagement was significant (β=.489, P<000). Thus, the moderating effect of LMX was seen to have statistical significant effect on employee engagement (β=231, P<.000). Furthermore, the results found interaction effect of LMX and Empowerment had no statistical significance on employee engagement (.000, P>.996).

The study revealed that leader–member exchange did not moderate the relationship between employee empowerment and employee engagement. This finding though not expected could be explained by the fact that social interaction, organizational commitment, role clarity, citizenship behaviour and job satisfaction, which are characteristics of leader-member exchange are also more of employee empowerment facets. Consequently, the relationship between employee empowerment and employee engagement is of a direct nature. By noting for instance that leader-member exchange impacts positively on creativity and innovativeness, Amabile *et al*. (2013) are simply stressing that leader-member exchange empowers employees in terms of creativity and innovativeness.

The argument then is that the cordial exchange that exists between employees and supervisors in manufacturing firms in Nairobi does not moderate between empowerment of employees and their engagement but rather, acts as an empowerment mode in its own right. Viewed, in this way, it can be argued that this explains why there is the scarcity of evidence on the moderating capacities of LMX in the linkage between employee empowerment and employee engagement.

5.1.7 Moderating Influence of Leader–Member Exchange on Employee Engagement and Innovative Behaviour

The seventh objective was to establish moderating effect of LMX on the relationship between employee engagement and IWB. The results reveal that the effect of employee engagement on IWB was significant (β=.348, P<000). Again, the LMX was seen to have statistical significant effect on IWB (β=245, P<.000). Furthermore, the results found interaction effect of LMX and Empowerment has negative statistical significance effect on employee engagement (-093, P<.05).

The implication of this finding is that although employee engagement drives innovative behaviour in manufacturing firms in Nairobi, the quality of interactions between employees and supervisors strengthens the capacity of employee engagement to influence innovative behaviour. The argument posited here is that the relationship and interactions between employees and supervisors has the potential to raise the levels of employee engagement with their work. Increased engagement therefore motivates innovativeness as has been noted by many previous studies (De Spiegelaere *et al.,* 2015; Hakanen *et al.,* 2008; Kim & Koo, 2017; Vithayaporn & Ashton, 2019).

The finding that leader-member exchange moderates the relationship between employee engagement and innovative work behaviour is indeed a novel one and represents a framework through which manufacturing firms can leverage employees' capacity to innovate. The finding confirms that it is not enough to just engage employees but there is need to nurture positive and cordial relationships between employees and their immediate supervisors or leaders. In this way, employees are bound to go an extra mile in the assigned tasks even when they are not adequately empowered. The Kenya Economic Report (2018) for instance, observes that the type of work which employees are tasked to perform may not necessarily elicit positive feelings. This may however be surmounted by positive and fruitful interactions between employees and their leaders.

It may then be argued that positive and fruitful interactions between employees and their leaders reinforces employee engagement and sees them to continue exerting maximum efforts in their work, continue feeling happy when working, continue being attached to their jobs, and continue being proud of their achievements which in

essence pushes them to be innovative. This reflects views by Vithayaporn and Ashton (2019) showing that engagement and innovation have a contingent relationship and often reinforce each other.

5.1.8 Employee Empowerment, Employee Engagement, Leader-Member Exchange, and Innovative Work Behaviour

The Eighth and last objective examined the moderating effect of leader-member exchange on the indirect effect of employee empowerment on innovative work behaviour through employee engagement. Finally, The study revealed that the indirect effect between employee empowerment and innovative work behaviour via employee engagement was moderated by leader-member exchange, and was high at lower levels of LMX and lower at higher levels coeff.= .223, CI =.109,331, significantly at the mean levels of LMX, coeff. = .167, CI = .098, .241 and much lower at the high levels of LMX coeff.= 123, CI = .040, .233. This finding represented the thesis of this study which argues that leader-member exchange is a very important factor in relationships linking employee empowerment and innovative work behaviour even when mediated by employee engagement. The study adds to existing literature by providing insight into the role of workplace relationships and social exchange upon innovative work behaviour in manufacturing firms in Nairobi.

The findings in the current study corroborate other studies which have confirmed that workplace exchanges are a precursor to improved performance in the workplace and a fulfillment of obligations to supervisors (Shaw *et al.,* 2009). The finding also takes cognizance of studies which identify innovative behaviour as a multi-dimensional process that is more than just the output of creative ideas (Carmeli, Meitar, & Weisberg, 2006).

5.2 Conclusions

Following the findings summarized in the previous sections, the following conclusions were drawn in line with the study objectives. Employee empowerment measured through power, information, knowledge and rewards accorded to the employees, remains critical in motivating them to be innovative in manufacturing firms in Nairobi. Such employee empowerment has a positive and significant influence on their innovativeness, and has seen them participate in decision making, assert control in their tasks, and gain more autonomy.

The employee engagement dimensions of behaviour and emotions are mainly employed by manufacturing firms in Nairobi to engage employees who are mainly drawn from low income settlements. Employee engagement has impacted positively and significantly on this category of employees, who have subsequently elicited elements of innovation in their day to day work.

Leader-member exchange that involves informal and formal contracts has seen supervisors and employees in manufacturing firms in Nairobi nurture positive interactions of a mutual nature.

Besides having a direct influence on innovative work behaviour, employee empowerment also had a direct effect on employee engagement in the context of manufacturing firms in Nairobi.

Employee engagement indeed partially mediated the indirect influence of employee empowerment on innovative work behaviour showing that manufacturing firms in Nairobi could either look to empowering employees directly and waiting to see their innovativeness, or empowering them and then engaging them in order to achieve more innovative behaviour.

Leader-member exchange in the context of the manufacturing firms in Nairobi had characteristics that bordered more on empowerment. As a result, leader-member exchange impacted directly and positively on employee engagement as opposed to moderating the relationship between employee empowerment and employee engagement. Leader-member exchange on the contrary moderated the relationship between employee engagement and innovative work behaviour. The implication here is that for manufacturing firms in Nairobi's industrial area, nurturing positive leader-member exchange is necessary in addition to employee engagement in order to maximize innovative behaviour among employees.

The indirect relationship between employee empowerment and innovative work behaviour via employee engagement is not enough to exhaustively stretch innovativeness among employees, but they also require positive exchanges and interactions with their leaders. Leaders should therefore not just assume that employees need empowerment and engagement, but should also know that the kind of interactions with leaders is essential.

5.3 Implications of the Study

5.3.1 Contribution to Knowledge

This study is unique in methodology adopted in terms of the assessment of the moderating effect of leader member exchange and how they have been linked to the causal effect of employee empowerment of innovative work behaviour of employees through the mediation of employee engagement support in manufacturing firms in Kenya. Similarly, the study encompassed a combination of data collection, analysis and procedures which provides a methodological contribution in the field of strategic management through an investigation of the effect of employee empowerment on

IWB. Furthermore, the inclusion of both hierarchical and multiple regression analyses to investigate the moderating effect of LMX on the relationship between employee empowerment and employee engagement and innovative work behaviour and use of the process macro by Andrew Hayes to generate the interaction plots, especially in manufacturing firms in Kenya, provided a key contribution and generation of new knowledge for effective management of the diverse workforce in organizations.

5.3.2 Implications for Theory

The study proposed a model that not only linked employee empowerment and employee innovative behaviour through employee engagement, but also involved subsequent interrelations whose results could have significant implications to theory. By anchoring innovative work behaviour on innovative systems theory, the researcher recognized that innovation was a systematic process that involved complex interactions. The finding of the study goes on to confirm that indeed innovative work behaviour in the context of manufacturing firms is a system of interactions between employee empowerment and employee innovative behaviour; employee engagement and employee innovative work behaviour; and more importantly between employee empowerment and employee innovativeness via engagement but supported by leader-member exchange. This is a novel dimension that expounds the complexity of employee innovativeness, and which requires more scrutiny of the innovative systems theory to capture such types of interactions.

Moreover, in advancing use of the social exchange theory, the researcher viewed leader–member exchange from the pedestal of interactions between employees and supervisors within the firms. The current study confirms that in the context where leader-member exchange and innovative work behaviour resides, social exchanges

are bound to take on systematic and complex approach. Consequently, scholarship on leader-member exchange and employee innovative behaviour ought to factor the role of a multitude of theories. Perhaps this explains why kanters structural empowerment as a theory has become central to innovative tendencies in organizations. The current study showed for instance that employee empowerment and leader-member exchange impact positively on innovative work behaviour. However, the study also revealed that leader-member exchange is a facet of employee empowerment. It is therefore important to re-examine the two constructs in line with kanters structural empowerment theory which would then illuminate on the points of convergence and divergence between the two constructs.

In applying the self-determination theory advocated by Deci and Ryan (2000), the researcher anticipated that besides the postulated relationships, internal drives can motivate an employee to be creative. The current study confirmed that intrinsic and extrinsic motivators were indeed critical in spurring employee innovative behaviour. The implication inherent in these findings is that discourse on interactions involving employee innovativeness should not rule out employees own determination to grow by being creative. Consequently, a richness of diverse theoretical underpinnings is indeed an ideal way to consider the construct of employee innovative work behaviour.

5.3.3 Implications for Practice

The study provides an opportunity for manufacturing industry stakeholders to identify constructs that can best explain innovativeness among employees. Basing on these findings, manufacturing firms in Nairobi and other counties in Kenya may find it prudent to give employees more power, autonomy, knowledge and information

avenues that could in turn expose them more to creativity. This however should not be done at the expense of other potential employee empowerment aspects that may not be explicit. Manufacturing firms therefore ought to devote more efforts in the provision of tools, techniques and methods that can be used to maximize employee empowerment and by extension, their innovativeness.

The study also brings to the fact that employee engagement is an important factor in the desire of manufacturing firms to be innovative. Various engagement factors that target employee behaviour and emotions were delineated. In view of the study findings, practitioners and stakeholders should aim to identify and enhance other mechanisms through which employees can be fully engaged in order to maximize innovative work behaviour among them. Indeed, the implication of the mediating potential of employee engagement on the link between employee empowerment and innovative work behaviour among employees is that, manufacturing firms' stakeholders have an alternative avenue through which to target innovativeness among their employees. In the event for instance, that their efforts to empower employees in order to directly spur innovation fails, they can choose to also to engage them and spur innovation indirectly.

A major contribution that the study makes to manufacturing industry stakeholders is that of showing that leader-member exchange is a critical player in employees innovative work behaviour. The study revealed that the interactions between employees and their supervisors have a direct impact on innovative work behaviour among the employees and in fact it contributes a larger proportion of variance in innovative work behaviour than empowerment and engagement. This should be taken seriously by management of such firms. Suffice it to say that most

manufacturing firms in Nairobi's industrial area are owned by Asians who sometimes don't interact well with employees. The study clearly shows that it is not only how much they are empowered or engaged that makes employees to be innovative but rather the environment within which they work which is informed by leader-member exchange relationships of a mutual nature. It is therefore imperative that manufacturing firm's stakeholders find ways in which they can strike a balance in applying the three constructs.

5.3.4 Implication for Policy

The findings of this study will be beneficial to policy makers to reinforce several areas of HRM policy and practice. This study will be useful for addressing innovative work behaviour gaps. Key areas to be addressed include empowerment structures such as power, information, knowledge and rewards. In addition, policy makers can make use of the findings of this study to evaluate how well the manufacturing sector can improve innovative behaviour of employees through engagement and relationship practices in order to contribute to economic growth.

Further the results of this study will be beneficial to national and county government through formulating policies that assist innovative work behaviour such as employee empowerment, employee engagement and quality relationship between manager and their employees. This will assist various professional bodies such as the employment act and labour laws (KBS, 2010). Likewise, the local government should oversee the implementation of innovative work behaviour by linking it with employee empowerment, employee engagement and Leader-Member Exchange in the manufacturing firms.

The critical role played by exchange relations between employees and supervisors should not be underestimated. Stakeholders in the manufacturing sector should look for ways through which employee engagement works in tandem with leader-member exchange in order to maximize employees innovative work behaviour. In other words, management of manufacturing firms should strengthen relationships between employees and their immediate leaders since; it provides an alternative avenue, through which manufacturing sector stakeholders can maximize employee innovativeness by tapping on their levels of engagement, and the good relationships that exist between supervisors and employees.

On the strength of the results showing that leader–member exchange positively and significantly moderates the indirect effect of employee empowerment on innovative work behaviour through employee engagement, the researcher recommends that manufacturing firms' management should take a holistic approach to development of innovative work behaviour. In this approach, firms should look towards indirectly empowering employees by engaging them, and seeking to maximize innovative work behaviour by further nurturing positive relationships between employees, supervisors and management.

5.3.5 Recommendations for future Research

This study may not have exhaustively included all the constructs of employee empowerment. It only focused on four among the many constructs; power, knowledge, information and rewards. A further review of employee empowerment may identify additional variables and other possible mediations and moderators or intervening variables which may broaden the range of effect between empowerment and innovative work behaviour. The study indicated strong relationships between the

selected empowerment practices and innovative work behaviour. However, these relationships have been tested exhaustively only, in the context of manufacturing firms in Kenya. Therefore, the replication of this study in other sectors could demonstrate the universality and significance of these constructs and how they relate to innovative work behaviour of employees in general.

The study focused on the mediating effect of employee engagement and moderating effect of LMX on the relationship between employee empowerment and engagement, and IWB. The influence of employee empowerment on IWB could be affected by other factors. Future research could consider: organisational culture, technology, and other leadership styles as possible influencers in the relationship. The study serves as a reference point for those who wish to study the relationship between employee empowerment and IWB. The researchers could use any of these factors as mediators or moderators to determine if they can obtain similar results.

The study targeted employees and as a result, it only relied on employee perceptions which could not be confirmed. Moreover, the study used only the quantitative approach which fails to account for incisive views of respondents. Future studies should consider bringing supervisors and managers on board, and using a mixed methods design that would allow for triangulation of data collection and data analysis methods thereby improving validity of study findings. Similarly, future research in this area should adopt different research designs such as a longitudinal one to provide a better assessment of the variables and how they improve over time.

REFERENCES

Abraham, S. (2012). Job Satisfaction as an Antecedent to Employee Engagement. *SIES Journal of Management, 8*(2).

Abuzaid, A. N. (2018). Employees' Empowerment and its Role in Achieving Strategic Success: A Practical Study on Jordanian Insurance Companies. *Jordan Journal of Business Administration, 14*(4).

Agarwal, U. A., Datta, S., Blake-Beard, S., & Bhargava, S. (2012). Linking LMX, innovative work behaviour and turnover intentions: The mediating role of work engagement. *Career development international, 17*(3), 208-230.

Aguinis, H., Gottfredson, R. K., & Joo, H. (2013). Best-practice recommendations for defining, identifying, and handling outliers. *Organizational Research Methods, 16*(2), 270-301.

Ahearne, M., Mathieu, J., & Rapp, A. (2005). To empower or not to empower your sales force? An empirical examination of the influence of leadership empowerment behavior on customer satisfaction and performance. *Journal of Applied psychology, 90*(5), 945.

Alavi, M., & Tiwana, A. (2002). Knowledge integration in virtual teams: The potential role of KMS. *Journal of the American Society for Information Science and Technology, 53*(12), 1029-1037.

Albrecht, S. L., & Andreetta, M. (2011). The influence of empowering leadership, empowerment and engagement on affective commitment and turnover intentions in community health service workers. *Leadership in health services*.

Alias, N. E., Noor, N., & Hassan, R. (2014). Examining the mediating effect of employee engagement on the relationship between talent management practices and employee retention in the Information and Technology (IT) organizations in Malaysia. *Journal of Human Resources Management and Labor Studies, 2*(2), 227-242.

Alimo-Metcalfe, B., Alban-Metcalfe, J., Bradley, M., Mariathasan, J., & Samele, C. (2008). The impact of engaging leadership on performance, attitudes to work and wellbeing at work: A longitudinal study. *Journal of health organization and management, 22*(6), 586-598.

Alkhodary, D. (2016). The relationship between employees' empowerment and innovative work behavior. *International Journal of Managerial Studies and Research (IJMSR), 4*(2), 1-15.

Alsop, R., Bertelsen, M., & Holland, J. (2006). Empowerment in Practice: From Analysis to Implementation. The World Bank: Washington, DC. https://doi. org/10.1596/978-0-8213-6450-5.

Alsughayir, A. (2017). The effect of leader-member exchange on innovative work behavior in the Saudi hospitality. *International Journal of Business and Management, 12*(6), 2017.

Amabile, T. M., Schatzel, E. A., Moneta, G. B., & Kramer, S. J. (2004). Leader behaviors and the work environment for creativity: Perceived leader support. *The Leadership Quarterly, 15*(1), 5-32.

Ambreen, S. (2005). Communication climate of the organization. Relationship between communication climate and leadership styles. *Unpublished M. Phil Dissertation). Islamabad: National Institute of Psychology, Quaid-i-Azam University*.

Ambula, R., Awino, Z. B., & K'Obonyo, P. (2016). The Role of Employee Outcomes in the Relationship between Learning Organization and Performance of Large Manufacturing Firms.

Åmo, B. W., & Kolvereid, L. (2005). Organizational strategy, individual personality and innovation behavior. *Journal of Enterprising Culture, 13*(01), 7-19.

Anastasi, A. (1986). Evolving concepts of test validation. *Annual review of psychology, 37*(1), 1-16.

Anderson, N., Potočnik, K., & Zhou, J. (2014). Innovation and creativity in organizations: A state-of-the-science review, prospective commentary, and guiding framework. *Journal of management, 40*(5), 1297-1333.

Anitha, J. (2014). Determinants of employee engagement and their impact on employee performance. *International journal of productivity and performance management, 63*(3), 308.

Anjum, A., Sabir, H. M., & Hussain, M. S. (2016). Effort-Enhancing HR Practices and Innovative Work Behavior: Role of Employee Empowerment. *International Journal of Academic Research in Business and Social Sciences, 6*(10), 2222-6990.

Arain, M., Campbell, M. J., Cooper, C. L., & Lancaster, G. A. (2010). What is a pilot or feasibility study? A review of current practice and editorial policy. *BMC medical research methodology, 10*(1), 1-7.

Arif, S., Zubair, A., & Manzoor, Y. (2012). Innovative work behavior and communication climate among employees of advertising agencies. *FWU Journal of Social Sciences, 6*(1), 65.

Ashikali, T., & Groeneveld, S. (2015). Diversity management in public organizations and its effect on employees' affective commitment: The role of transformational leadership and the inclusiveness of the organizational culture. *Review of Public Personnel Administration, 35*(2), 146-168.

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

Axtell, C. M., Holman, D. J., Unsworth, K. L., Wall, T. D., Waterson, P. E., & Harrington, E. (2000). Shopfloor innovation: Facilitating the suggestion and implementation of ideas. *Journal of occupational and organizational psychology, 73*(3), 265-285.

Azmee, N. N., & Kassim, N. A. (2019). Employee Empowerment, Learning Culture and Technology in a Research-based Organization. *Decision making, 7*, 8.

Babbie, E. R. (2015). *The practice of social research*: Nelson Education.

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

Bagozzi, R. P., Yi, Y., & Phillips, L. W. (1991). Assessing construct validity in organizational research. *Administrative science quarterly*, 421-458.

Bakker, A. B., & Bal, M. P. (2010). Weekly work engagement and performance: A study among starting teachers. *Journal of occupational and organizational psychology, 83*(1), 189-206.

Baraldi, A. N., & Enders, C. K. (2010). An introduction to modern missing data analyses. *Journal of school psychology, 48*(1), 5-37.

Bartels, J., Pruyn, A., De Jong, M., & Joustra, I. (2007). Multiple organizational identification levels and the impact of perceived external prestige and communication climate. *Journal of Organizational Behavior: The International Journal of Industrial, Occupational and Organizational Psychology and Behavior, 28*(2), 173-190.

Basaglia, S., Caporarello, L., Magni, M., & Pennarola, F. (2010). IT knowledge integration capability and team performance: the role of team climate. *International Journal of Information Management, 30*(6), 542-551.

Bauer, T. N., & Green, S. G. (1996). Development of leader-member exchange: A longitudinal test. *Academy of management journal, 39*(6), 1538-1567.

Becker, M. C., & Zirpoli, F. (2003). Organising new product development: Knowledge hollowing-out and knowledge integration: DRUID, Copenhagen Business School, Department of Industrial Economics and ….

Berraies, S., Chaher, M., & Yahia, K. B. (2014). Employee empowerment and its importance for trust, innovation and organizational performance. *Business Management and Strategy, 5*(2), 82-103.

Bibi, A., & Afsar, B. (2018). Leader-member exchange and innovative work behavior: The role of intrinsic motivation, psychological empowerment, and creative process engagement. *Perspectives of Innovations, Economics and Business, 18*(1), 25-43.

Blau, P. M. (1964). Justice in social exchange. *Sociological Inquiry, 34*(2), 193-206.

Borins, S. (2001). Encouraging innovation in the public sector. *Journal of intellectual capital, 2*(3), 310-319.

Bos-Nehles, A., Renkema, M., & Janssen, M. (2017). HRM and innovative work behaviour: A systematic literature review. *Personnel review, 46*(7), 1228-1253.

Bouwhuis, L. (2008). *Verklaren innovatief gedrag van docenten: een onderzoek naar de individuele variabelen, self-efficacy en leerdoeloriëntatie en de inzet van HRM-instrumenten.* University of Twente.

Bowen, D. E., & Lawler III, E. E. (2006). The empowerment of service workers: What, why, how, and when. *Managing innovation and change, 33*, 155-169.

Brad Shuck, M., Rocco, T. S., & Albornoz, C. A. (2011). Exploring employee engagement from the employee perspective: Implications for HRD. *Journal of European Industrial Training, 35*(4), 300-325.

Breevaart, K., Bakker, A. B., Demerouti, E., & van den Heuvel, M. (2015). Leader-member exchange, work engagement, and job performance. *Journal of managerial psychology, 30*(7), 754-770.

Brown, J. C., & Kanter, R. M. (1982). *Empowerment: key to effectiveness.* Paper presented at the Hospital Forum.

Bunpin III, J. J. D., Chapman, S., Blegen, M., & Spetz, J. (2016). Differences in innovative behavior among hospital-based registered nurses. *Journal of Nursing Administration, 46*(3), 122-127.

Burns, A. C., & Bush, R. F. (2007). *Basic marketing research using Microsoft Excel data analysis*: Prentice Hall Press.

Bysted, R., & Jespersen, K. R. (2014). Exploring managerial mechanisms that influence innovative work behaviour: Comparing private and public employees. *Public Management Review, 16*(2), 217-241.

Carmeli, A., Meitar, R., & Weisberg, J. (2006). Self-leadership skills and innovative behavior at work. *International journal of manpower, 27*(1), 75-90.

Celik, A., Cakici, A. B., & Celik, N. (2014). The effects of employee empowerment applications on organizational creativity and innovativeness in enterpriseses: The case of Oiz. *European Scientific Journal, 10*(10).

Chang, L.-C., & Liu, C.-H. (2008). Employee empowerment, innovative behavior and job productivity of public health nurses: A cross-sectional questionnaire survey. *International journal of nursing studies, 45*(10), 1442-1448.

Chatterjee, S., & Hadi, A. S. (2015). *Regression analysis by example*: John Wiley & Sons.

Chen, C. C., Zhang, A. Y., & Wang, H. (2014). Enhancing the effects of power sharing on psychological empowerment: The roles of management control and power distance orientation. *Management and Organization Review, 10*(1), 135-156.

Christian, M. S., Garza, A. S., & Slaughter, J. E. (2011). Work engagement: A quantitative review and test of its relations with task and contextual performance. *Personnel psychology, 64*(1), 89-136.

Chung, S. (2002). Building a national innovation system through regional innovation systems. *Technovation, 22*(8), 485-491.

Cole, M. S., Schaninger Jr, W. S., & Harris, S. G. (2002). The workplace social exchange network: A multilevel, conceptual examination. *Group & Organization Management, 27*(1), 142-167.

Cooper, D. R., & Schindler, P. S. (2014). *Business research methods*: McGraw-Hil.

Cooper, D. R., Schindler, P. S., & Sun, J. (2006). *Business research methods* (Vol. 9): McGraw-Hill Irwin New York.

Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches*: Sage publications.

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

Dajani, M. A. Z. (2015). The impact of employee engagement on job performance and organisational commitment in the Egyptian banking sector. *Journal of Business and Management Sciences, 3*(5), 138-147.

Damanpour, F., & Schneider, M. (2006). Phases of the adoption of innovation in organizations: effects of environment, organization and top managers 1. *British journal of Management, 17*(3), 215-236.

Damanpour, F., & Schneider, M. (2009). Characteristics of innovation and innovation adoption in public organizations: Assessing the role of managers. *Journal of public administration research and theory, 19*(3), 495-522.

Dan, X., Xu, S., Liu, J., Hou, R., Liu, Y., & Ma, H. (2018). Relationships among structural empowerment, innovative behaviour, self-efficacy, and career success in nursing field in mainland China. *International journal of nursing practice, 24*(5), e12674.

Dawson, J. F. (2014). Moderation in management research: What, why, when, and how. *Journal of business and psychology, 29*(1), 1-19.

De Jong, J., & Den Hartog, D. (2010). Measuring innovative work behaviour. *Creativity and innovation management, 19*(1), 23-36.

De Jong, J., J.P, & Den Hartog, D., N. (2007). How leaders influence employees' innovative behaviour. *European Journal of innovation management, 10*(1), 41-64.

De Leeuw, E. D., Hox, J. J., & Dillman, D. A. (2008). *International handbook of survey methodology*: Taylor & Francis Group/Lawrence Erlbaum Associates.

De Spiegelaere, S., Van Gyes, G., De Witte, H., Niesen, W., & Van Hootegem, G. (2014). On the relation of job insecurity, job autonomy, innovative work behaviour and the mediating effect of work engagement. *Creativity and innovation management, 23*(3), 318-330.

De Spiegelaere, S., Van Gyes, G., De Witte, H., & Van Hootegem, G. (2015). Job design, work engagement and innovative work behavior: A multi-level study on Karasek's learning hypothesis. *management revue*, 123-137.

De Vaus, D. (2002). *Analyzing social science data: 50 key problems in data analysis*: Sage.

De Vos, A. S., Strydom, H., Fouché, C. B., & Delport, C. S. (2005). *Research at grass roots: For the social sciences and human service professions*: van Schaik Pretoria.

Deci, E. L., & Ryan, R. M. (1985). Cognitive evaluation theory *Intrinsic motivation and self-determination in human behavior* (pp. 43-85): Springer.

Deci, E. L., & Ryan, R. M. (2000). The" what" and" why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological inquiry, 11*(4), 227-268.

Dillman, D. A. (2000). *Procedures for conducting government-sponsored establishment surveys: Comparisons of the total design method (TDM), a traditional cost-compensation model, and tailored design.* Paper presented at the Proceedings of American Statistical Association, Second International Conference on Establishment Surveys.

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.

Dyer, J. H., & Nobeoka, K. (2000). Creating and managing a high-performance knowledge-sharing network: the Toyota case. *Strategic management journal, 21*(3), 345-367.

Edquist, C. (2001). *The Systems of Innovation Approach and Innovation Policy: An account of the state of the art.* Paper presented at the DRUID conference, Aalborg.

Elrehail, H., Harazneh, I., Abuhjeeleh, M., Alzghoul, A., Alnajdawi, S., & Ibrahim, H. M. H. (2019). Employee satisfaction, human resource management practices and competitive advantage. *European Journal of Management and Business Economics*.

Enberg, C., Lindkvist, L., & Tell, F. (2010). Knowledge integration at the edge of technology: On teamwork and complexity in new turbine development. *International Journal of Project Management, 28*(8), 756-765.

Enders, C. K. (2010). *Applied missing data analysis*: Guilford press.

F. Hair Jr, J., Sarstedt, M., Hopkins, L., & G. Kuppelwieser, V. (2014). Partial least squares structural equation modeling (PLS-SEM) An emerging tool in business research. *European Business Review, 26*(2), 106-121.

Fernandez, S., & Moldogaziev, T. (2013). Using employee empowerment to encourage innovative behavior in the public sector. *Journal of public administration research and theory, 23*(1), 155-187.

Field, A. (2017). *Discovering statistics using IBM SPSS statistics: North American edition*: Sage.

Fleming, J. H., & Asplund, J. (2007). *Human sigma: Managing the employee-customer encounter*: Simon and Schuster.

Fowler Jr, F. J. (2013). *Survey research methods*: Sage publications.

Fox, J. (2019). *Regression diagnostics: An introduction* (Vol. 79): SAGE Publications, Incorporated.

Fu, N., Flood, P. C., Bosak, J., Morris, T., & O'Regan, P. (2015). How do high performance work systems influence organizational innovation in professional service firms? *Employee Relations, 37*(2), 209-231.

Furst, S. A., & Cable, D. M. (2008). Employee resistance to organizational change: Managerial influence tactics and leader-member exchange. *Journal of Applied psychology, 93*(2), 453.

Gerstner, C. R., & Day, D. V. (1997). Meta-Analytic review of leader–member exchange theory: Correlates and construct issues. *Journal of Applied psychology, 82*(6), 827.

Gholami, Z., Soltanahmadi, J. A., Pashavi, G., & Nekouei, S. (2013). Empowerment as a basic step in upgrading organizational commitment and organizational citizenship behaviors: A Case study on public sector in Iran. *World Applied Sciences Journal, 21*(11), 1693-1698.

Gilley, A., Dixon, P., & Gilley, J. W. (2008). Characteristics of leadership effectiveness: Implementing change and driving innovation in organizations. *Human Resource Development Quarterly, 19*(2), 153-169.

Graen, G., & Cashman, J. F. (1975). A role-making model of leadership in formal organizations: A developmental approach. *Leadership frontiers, 143*, 165.

Graen, G. B., & Scandura, T. A. (1987). Toward a psychology of dyadic organizing. *Research in organizational behavior*.

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.

Graham, J., Cumsille, P., & Elek-Fisk, E. (2003). Research methods in psychology.

Grant, R. M. (1996). Prospering in dynamically-competitive environments: Organizational capability as knowledge integration. *Organization science, 7*(4), 375-387.

Gratton, C., & Jones, I. (2014). *Research methods for sports studies*: Routledge.

Greguras, G. J., & Ford, J. M. (2006). An examination of the multidimensionality of supervisor and subordinate perceptions of leader-member exchange. *Journal of occupational and organizational psychology, 79*(3), 433-465.

Grossnickle, J. (2001). *The handbook of online marketing research: knowing your customer using the Net*: McGraw-Hill, Inc.

Hair, J., Black, W., & Babin, B. (2010). Anderson. RE, 2010. Multivariate Data Analysis. *New Jersey, Pearson Prentice Hall*.

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). Multivariate data analysis: Global edition: Pearson Higher Education Upper Saddle River, NJ.

Hakanen, J. J., Perhoniemi, R., & Toppinen-Tanner, S. (2008). Positive gain spirals at work: From job resources to work engagement, personal initiative and work-unit innovativeness. *Journal of vocational behavior, 73*(1), 78-91.

Hallgren, M., & Olhager, J. (2009a). Flexibility configurations: Empirical analysis of volume and product mix flexibility. *Omega, 37*(4), 746-756.

Hallgren, M., & Olhager, J. (2009b). Lean and agile manufacturing: external and internal drivers and performance outcomes. *International Journal of Operations & Production Management, 29*(10), 976-999.

Hanaysha, J. (2016). Examining the effects of employee empowerment, teamwork, and employee training on organizational commitment. *Procedia-Social and Behavioral Sciences, 229*(298-306), 298-306.

Harter, J. K., Schmidt, F. L., & Keyes, C. L. (2003). Well-being in the workplace and its relationship to business outcomes: A review of the Gallup studies. *Flourishing: Positive psychology and the life well-lived, 2*, 205-224.

Hayes, A. F. (2017). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*: Guilford Publications.

Hayes, A. F. (2018). Partial, conditional, and moderated moderated mediation: Quantification, inference, and interpretation. *Communication monographs, 85*(1), 4-40.

Hayes, A. F., & Preacher, K. J. (2014). Statistical mediation analysis with a multicategorical independent variable. *British journal of mathematical and statistical psychology, 67*(3), 451-470.

Hebenstreit, J. J. (2012). Nurse educator perceptions of structural empowerment and innovative behavior. *Nursing Education Perspectives, 33*(5), 297-301.

Hekkert, M. P., Suurs, R., Negro, S. O., Smits, R. E. H. M., & Kuhlmann, S. (2007). Functions of Innovation Systems: A New Approach for Analysing Technological Change. Technological Forecasting and Social Change. *74*, 413 - 432.

Hekkert, M. P., Suurs, R. A., Negro, S. O., Kuhlmann, S., & Smits, R. E. (2007). Functions of innovation systems: A new approach for analysing technological change. *Technological forecasting and social change, 74*(4), 413-432.

Henderson, D. J., Liden, R. C., Glibkowski, B. C., & Chaudhry, A. (2009). LMX differentiation: A multilevel review and examination of its antecedents and outcomes. *The Leadership Quarterly, 20*(4), 517-534.

Ho, R. (2013). *Handbook of univariate and multivariate data analysis with IBM SPSS*: Chapman and Hall/CRC.

Hof, M. (2012). *Questionnaire evaluation with factor analysis and Cronbach's Alpha: an example*. Paper presented at the Seminar in Methodology and Statistics.

Hwang, J., Lee, J.-S., & Kim, H. (2019). Perceived innovativeness of drone food delivery services and its impacts on attitude and behavioral intentions: The moderating role of gender and age. *International Journal of Hospitality Management, 81*, 94-103.

Ikiara, G. K., Olewe-Nyunya, J., & Odhiambo, W. (2004). Kenya: Formulation and implementation of strategic trade and industrial policies. *The Politics of Trade and Industrial Policy in Africa. Forced Consensus*, 205-225.

Inkpen, A. C. (1998). Learning and knowledge acquisition through international strategic alliances. *Academy of Management Perspectives, 12*(4), 69-80.

Insan, A., Astuti, E. S., Raharjo, K., & Hamid, D. (2013). The effect of empowerment of the organizational commitment and the job satisfaction of the employees of the National Electricity Company (Ltd.) in South Sulawesi Province Indonesia. *Asian transactions on basic & applied sciences, 3*(4), 13-23.

Itam, U., & Singh, S. (2017). Examining the mediation effect of employee engagement on internal brand practices and outcome variables in the organized retail sector. *International Business Management, 11*(3), 673-682.

Jacquiline, F. (2014). Employee empowerment and job satisfaction. *Researchjournali's journal of human resource, 2*(2), 1-12.

Jada, U. R., Mukhopadhyay, S., & Titiyal, R. (2019). Empowering leadership and innovative work behavior: a moderated mediation examination. *Journal of Knowledge Management*.

Janssen, O., & Van Yperen, N. W. (2004). Employees' goal orientations, the quality of leader-member exchange, and the outcomes of job performance and job satisfaction. *Academy of management journal, 47*(3), 368-384.

Jiang, J., Wang, S., & Zhao, S. (2012). Does HRM facilitate employee creativity and organizational innovation? A study of Chinese firms. *The International Journal of Human Resource Management, 23*(19), 4025-4047.

Joanes, D., & Gill, C. (1998). Comparing measures of sample skewness and kurtosis. *Journal of the Royal Statistical Society: Series D (The Statistician), 47*(1), 183-189.

Johnson, J., Truxillo, D. M., Erdogan, B., Bauer, T. N., & Hammer, L. (2009). Perceptions of overall fairness: are effects on job performance moderated by leader-member exchange? *Human Performance, 22*(5), 432-449.

Jong Jeroen, P., & Hartog Deanne, N. (2007). Den How leaders influence employees' innovative behavior. *European Journal of innovation management, 10*(1), 41-64.

Kahn, K. B. (2018). Understanding innovation. *Business Horizons, 61*(3), 453-460.

Kahn, W. A. (1990). Psychological conditions of personal engagement and disengagement at work. *Academy of management journal, 33*(4), 692-724.

Kahreh, M. S., Ahmadi, H., & Hashemi, A. (2011). Achieving competitive advantage through empowering employees: An empirical study. *Far East Journal of Psychology and Business, 3*(2), 26-37.

KAM. (2017). Ndustry Training Needs Assessment Report.

KAM. (2018). Kenya Association of Manufacturers *Manufacturing in Kenya under the "Big 4 Agenda"*

Kanter, R. M. (1988). When a thousand flowers bloom: Structural, collective, and social conditions for innovation in organizations. *Knowledge Management and Organisational Design, 10*, 93-131.

Kanter, R. M. (1997). Men and women of the corporation (2nd reprint of 1993 edition): New York, NY: Basic Books.

Karatepe, O. M. (2013). Perceptions of organizational politics and hotel employee outcomes: the mediating role of work engagement. *International Journal of Contemporary Hospitality Management, 25*(1), 82-104.

Kathuria, R., Partovi, F. Y., & Greenhaus, J. H. (2010). Leadership practices, competitive priorities, and manufacturing group performance. *International Journal of Operations & Production Management, 30*(10), 1080-1105.

Kelemba, J., Chepkilot, R., & Zakayo, C. (2017). Influence of teamwork practices on employee performance in public service in Kenya. *African Research Journal of Education and Social Sciences, 4*(3), 1-9.

Khan, M. N., & Malik, M. F. (2017). "My leader's group is my group". Leader-member exchange and employees' behaviours. *European Business Review, 29*(5), 551-571.

Kim, M.-S., & Koo, D.-W. (2017a). Linking LMX, engagement, innovative behavior, and job performance in hotel employees. *International Journal of Contemporary Hospitality Management, 29*(12), 3044-3062.

Kim, M.-S., & Koo, D.-W. (2017b). Linking LMX, engagement, innovative behavior, and job performance in hotel employees. *International Journal of Contemporary Hospitality Management*.

Kim, S. Y., & Fernandez, S. (2017). Employee empowerment and turnover intention in the US federal bureaucracy. *The American Review of Public Administration, 47*(1), 4-22.

King, N., & Anderson, N. (2002). *Managing innovation and change: A critical guide for organizations*: Cengage Learning EMEA.

Kline, R. B. (2005). Methodology in the social sciences.

Kline, R. B. (2015). *Principles and practice of structural equation modeling*: Guilford publications.

Kluska, K. M., Laschinger, H. S., & Kerr, M. S. (2004). Staff nurse empowerment and effort-reward imbalance. *Nursing Leadership-Academy of Canadian Executive Nurses-, 17*, 112-128.

Knol, J., & Van Linge, R. (2009). Innovative behaviour: The effect of structural and psychological empowerment on nurses. *Journal of Advanced Nursing, 65*(2), 359-370.

Kodama, M. (2009). Boundaries innovation and knowledge integration in the Japanese firm. *Long range planning, 42*(4), 463-494.

Kosar, R., & Naqvi, S. M. M. R. (2016). Psychological Empowerment And Employee Behaviors Employee Engagement As Mediator And Leader-Member Exchange As Moderator. *Economic and Social Development: Book of Proceedings*, 485.

Kotabe, M., Jiang, C. X., & Murray, J. Y. (2011). Managerial ties, knowledge acquisition, realized absorptive capacity and new product market performance of emerging multinational companies: A case of China. *Journal of World Business, 46*(2), 166-176.

Krause, D. E. (2004). Influence-based leadership as a determinant of the inclination to innovate and of innovation-related behaviors: An empirical investigation. *The Leadership Quarterly, 15*(1), 79-102.

Kun, Q., Hai-yan, S., & Lin-li, L. (2007). *the effect of empowerment on employees' organizational commitment: Psychological contract as mediator.* Paper presented at the 2007 International Conference on Management Science and Engineering.

Kuokkanen, L., Leino-Kilpi, H., & Katajisto, J. (2003). Nurse empowerment, job-related satisfaction, and organizational commitment. *Journal of nursing care quality, 18*(3), 184-192.

Kutner, M. H., Nachtsheim, C. J., Neter, J., & Li, W. (2005). *Applied linear statistical models* (Vol. 5): McGraw-Hill Irwin New York.

Kuvaas, B., Buch, R., Dysvik, A., & Haerem, T. (2012). Economic and social leader–member exchange relationships and follower performance. *The Leadership Quarterly, 23*(5), 756-765.

Langelaan, S., Bakker, A. B., Van Doornen, L. J., & Schaufeli, W. B. (2006). Burnout and work engagement: Do individual differences make a difference? *Personality and individual differences, 40*(3), 521-532.

Laschinger, H. K. S., Finegan, J., Shamian, J., & Wilk, P. (2001). Impact of structural and psychological empowerment on job strain in nursing work settings: expanding Kanter's model. *JONA: The Journal of Nursing Administration, 31*(5), 260-272.

Laschinger, H. K. S., Finegan, J., Shamian, J., & Wolk, P. (2002). *A Longitudinal Analysis of the Impact of Workplace Empowerment on Staff Nurses'work Satisfaction.* Paper presented at the Academy of Management Proceedings.

Laschinger, H. K. S., Finegan, J. E., Shamian, J., & Wilk, P. (2004). A longitudinal analysis of the impact of workplace empowerment on work satisfaction. *Journal of Organizational Behavior: The International Journal of Industrial, Occupational and Organizational Psychology and Behavior, 25*(4), 527-545.

Lautizi, M., Laschinger, H. K., & Ravazzolo, S. (2009). Workplace empowerment, job satisfaction and job stress among Italian mental health nurses: an exploratory study. *Journal of Nursing Management, 17*(4), 446-452.

Ledwell, E., Andrusyszyn, M.-A., & Iwasiw, C. (2006). Nursing students' empowerment in distance education: testing Kanter's Theory. *International Journal of E-Learning & Distance Education/Revue internationale du e-learning et la formation à distance, 21*(2), 78-95.

Li, X., Sanders, K., & Frenkel, S. (2012). How leader–member exchange, work engagement and HRM consistency explain Chinese luxury hotel employees' job performance. *International Journal of Hospitality Management, 31*(4), 1059-1066.

Lian, H., Yen, H., Huang, C., Feng, Q., Qin, L., Bashir, M. A., . . . Di, H. (2020). CN-China: Revised runoff curve number by using rainfall-runoff events data in China. *Water Research*, 115767.

Liden, R. C., & Graen, G. (1980). Generalizability of the vertical dyad linkage model of leadership. *Academy of management journal, 23*(3), 451-465.

Lockwood, N. R. (2007). Leveraging employee engagement for competitive advantage. *Society for Human Resource Management Research Quarterly, 1*(1), 1-12.

Longman, T. P. (1998). Empowering the weak and protecting the powerful: The contradictory nature of churches in Central Africa. *African Studies Review*, 49-72.

Lu, X., & Zhang, G. (2007). The Study of the Work Motivation Effect on Individual Innovation Behavior. *Soft science, 21*, 124-127.

Luzinski, C. (2012). An innovative environment where empowered nurses flourish. *JONA: The Journal of Nursing Administration, 42*(1), 3-4.

MacKinnon, D. (2012). *Introduction to statistical mediation analysis*: Routledge.

MacPhee, M., Wardrop, A., Campbell, C., & Wejr, P. (2011). The synergy professional practice model and its patient characteristics tool: A staff empowerment strategy. *Nursing Leadership, 24*(3), 42-55.

Madjar, N. (2005). The contributions of different groups of individuals to employees' creativity. *Advances in Developing Human Resources, 7*(2), 182-206.

Maizura, H., Masilamani, R., & Aris, T. (2009). Reliability (internal consistency) of the job content questionnaire on job stress among office workers of a multinational company in Kuala Lumpur. *Asia Pacific Journal of Public Health, 21*(2), 216-222.

Makoba, J. W. (1993). Toward a general theory of social exchange. *Social Behavior and Personality: an international journal, 21*(3), 227-239.

Martin, R., Guillaume, Y., Thomas, G., Lee, A., & Epitropaki, O. (2016). Leader–member exchange (LMX) and performance: A meta-analytic review. *Personnel psychology, 69*(1), 67-121.

Mayfield, M., & Mayfield, J. (2009). The role of leader-follower relationships in leader communication: A test using the LMX and motivating language models. *The journal of business inquiry, 8*(1), 65-82.

Mbizi, R., Hove, L., Thondhlana, A., & Kakava, N. (2013). Innovation in SMEs: A review of its role to organisational performance and SMEs operations sustainability. *Interdisciplinary Journal of Contemporary Research in Business, 4*(11), 370-389.

McEwen, D. (2011). Employee engagement: A Systemic approach to high employee engagement.

Meier, K. J., & O'Toole Jr, L. J. (2013). I think (I am doing well), therefore I am: Assessing the validity of administrators' self-assessments of performance. *International Public Management Journal, 16*(1), 1-27.

Menon, S. (2001). Employee empowerment: An integrative psychological approach. *Applied psychology, 50*(1), 153-180.

Meyerson, G., & Dewettinck, B. (2012). Effect of empowerment on employees performance. *Advanced Research in Economic and Management Sciences, 2*(1), 40-46.

Mghendi, T. (2011). Kenya leading the way in technological innovation. In T. I. Blog (Ed.).

Miller, J. G., & Roth, A. V. (1994). A taxonomy of manufacturing strategies. *Management Science, 40*(3), 285-304.

Muma, M., Iravo, A., & Omondi, M. (2014). Effect of training needs assessment on employee commitment in public universities: a case study of jomo kenyatta university of agriculture and technology. *International Journal of Academic Research in Business and Social Sciences, 4*(9), 233.

Mundia, C. N., & Iravo, M. (2014). Role of mentoring programs on the employee performance in organisations: a survey of public universities in Nyeri County, Kenya.

Muñoz-Doyague, M. F., & Nieto, M. (2012). Individual creativity performance and the quality of interpersonal relationships. *Industrial Management & Data Systems, 112*(1), 125-145.

Murgor, P. K. (2014). *External environment, firm capabilities, strategic responses and performance of large scale manufacturing firms in Kenya.* University of Nairobi.

Nafees, A. (2006). Organizational culture as a predictor of innovative work behavior. *Unpublished M. Phil Dissertation). Islamabad: National Institute of Psychology, Quaid-i-Azam University*.

Nawaz, M. S., Hassan, M., Hassan, S., Shaukat, S., & Asadullah, M. A. (2014). Impact of employee training and empowerment on employee creativity through employee engagement: Empirical evidence from the manufacturing sector of Pakistan. *Middle-East Journal of Scientific Research, 19*(4), 593-601.

Neuman, W. L. (2012). Designing the Face-to-Face Survey *Handbook of Survey Methodology for the Social Sciences* (pp. 227-248): Springer.

Nienaber, H., & Martins, N. (2014a). An employee engagement instrument and framework building on existing research. *Mediterranean journal of social sciences, 5*(20), 485.

Nienaber, H., & Martins, N. (2014b). An employee engagement instrument and framework building on existing research. *Mediterranean journal of social sciences, 5*(20), 485-485.

Nurgraha, J., & Mulyadi, H. (2018). Creating product innovation in micro creative industry in Indonesia. *Journal of Entrepreneurship Education, 21*(2), 1-11.

Nusrat, F. (2018). Stimulation of Efficient Employee Performance through Human Resource Management Practices: A Study on the Health Care Sector of Bangladesh. *International Journal of Business and Social Research, 8*(1), 1-18.

Nystrom, P. C., Ramamurthy, K., & Wilson, A. L. (2002). Organizational context, climate and innovativeness: adoption of imaging technology. *Journal of engineering and technology management, 19*(3-4), 221-247.

Oldham, G. R., & Cummings, A. (1996). Employee creativity: Personal and contextual factors at work. *Academy of management journal, 39*(3), 607-634.

Osborne, J. W., & Waters, E. (2002). Four assumptions of multiple regression that researchers should always test. *Practical assessment, research, and evaluation, 8*(1), 2.

Paré, G., & Tremblay, M. (2007). The influence of high-involvement human resources practices, procedural justice, organizational commitment, and citizenship behaviors on information technology professionals' turnover intentions. *Group & Organization Management, 32*(3), 326-357.

Pieterse, A. N., Van Knippenberg, D., Schippers, M., & Stam, D. (2010). Transformational and transactional leadership and innovative behavior: The moderating role of psychological empowerment. *Journal of Organizational Behavior, 31*(4), 609-623.

Podsakoff, N. (2003). Common method biases in behavioral research: a critical review of the literature and recommended remedies. *Journal of Applied psychology, 885*(879), 10.1037.

Popli, S., & Rizvi, I. A. (2016). Drivers of employee engagement: The role of leadership style. *Global Business Review, 17*(4), 965-979.

Potočnik, K., & Anderson, N. (2016). A constructively critical review of change and innovation-related concepts: towards conceptual and operational clarity. *European journal of work and organizational psychology, 25*(4), 481-494.

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.

Ramamoorthy, N., Flood, P. C., Slattery, T., & Sardessai, R. (2005). Determinants of innovative work behaviour: Development and test of an integrated model. *Creativity and innovation management, 14*(2), 142-150.

Ramesh, R., & Kumar, K. S. (2014). Role of employee empowerment in organizational development. *International Journal of scientific research and management (IJSRM), 2*(8), 1241-1245.

Rammer, C., Czarnitzki, D., & Spielkamp, A. (2009). Innovation success of non-R&D-performers: substituting technology by management in SMEs. *Small Business Economics, 33*(1), 35-58.

Raza, H., Mahmood, J., Owais, M., & Raza, A. (2015). Impact of employee empowerment on job satisfaction of employees in corporate banking sector employees of Pakistan. *Journal of Applied Environmental and Biological Sciences, 5*(2), 1-7.

Reuvers, M., Van Engen, M. L., Vinkenburg, C. J., & Wilson-Evered, E. (2008). Transformational leadership and innovative work behaviour: Exploring the relevance of gender differences. *Creativity and innovation management, 17*(3), 227-244.

Revilla, E., & Villena, V. H. (2012). Knowledge integration taxonomy in buyer–supplier relationships: Trade-offs between efficiency and innovation. *International Journal of Production Economics, 140*(2), 854-864.

Rubin, A., & Babbie, E. (2009). Essential research methods for social work . Belmont, CA: Brooks: Cole Publishing Co.

Rüschoff, B. (2008). *Uncovering individual potential: An integrative approach to LMX and transformational leadership.* University of Twente.

Sahoo, C. K., Behera, N., & Tripathy, S. K. (2010). Employee empowerment and individual commitment: An analysis from integrative review of research.

Saif, N. I., & Saleh, A. S. (2013). Psychological empowerment and job satisfaction in Jordanian hospitals. *International Journal of Humanities and Social Science, 3*(16), 250-257.

Saks, A. M., & Gruman, J. A. (2011). Getting newcomers engaged: The role of socialization tactics. *Journal of managerial psychology, 26*(5), 383-402.

Salanova, M., Agut, S., & Peiró, J. M. (2005). Linking organizational resources and work engagement to employee performance and customer loyalty: the mediation of service climate. *Journal of Applied psychology, 90*(6), 1217.

Saldivar, M. (2012). A primer on survey response rate. *Florida State University: Learning Systems Institute*.

Salin, D. (2003). Ways of explaining workplace bullying: A review of enabling, motivating and precipitating structures and processes in the work environment. *Human relations, 56*(10), 1213-1232.

Sanz-Valle, R., Naranjo-Valencia, J. C., Jiménez-Jiménez, D., & Perez-Caballero, L. (2011). Linking organizational learning with technical innovation and organizational culture. *Journal of Knowledge Management, 15*(6), 997-1015.

Sattar, T., Ahmad, K., & Hassan, S. M. (2015). Role of human resource practices in employee performance and job satisfaction with mediating effect of employee engagement. *Pakistan Economic and Social Review*, 81-96.

Saunders, M. L., & Lewis, P. (2009). P. & thornhill, a.(2009). *Research methods for business students, 4*.

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.

Scandura, T. A., & Pellegrini, E. K. (2008). Trust and leader—member exchange: a closer look at relational vulnerability. *Journal of Leadership & Organizational Studies, 15*(2), 101-110.

Schaufeli, W. B., & Bakker, A. B. (2004). Job demands, job resources, and their relationship with burnout and engagement: A multi-sample study. *Journal of Organizational Behavior: The International Journal of Industrial, Occupational and Organizational Psychology and Behavior, 25*(3), 293-315.

Schaufeli, W. B., Martinez, I. M., Pinto, A. M., Salanova, M., & Bakker, A. B. (2002). Burnout and engagement in university students: A cross-national study. *Journal of cross-cultural psychology, 33*(5), 464-481.

Schaufeli, W. B., Salanova, M., González-Romá, V., & Bakker, A. B. (2002). The measurement of engagement and burnout: A two sample confirmatory factor analytic approach. *Journal of Happiness studies, 3*(1), 71-92.

Schlaile, M. P., Urmetzer, S., Blok, V., Andersen, A. D., Timmermans, J., Mueller, M., . . . Pyka, A. (2017). Innovation systems for transformations towards sustainability? Taking the normative dimension seriously. *Sustainability, 9*(12), 2253.

Schneider, B., Macey, W. H., Barbera, K. M., & Martin, N. (2009). Driving customer satisfaction and financial success through employee engagement. *People and Strategy, 32*(2), 22.

Scott, S. G., & Bruce, R. (1994). *Creating innovative behavior among R&D professionals: the moderating effect of leadership on the relationship between problem-solving style and innovation.* Paper presented at the Proceedings of 1994 IEEE International Engineering Management Conference-IEMC'94.

Seibert, S. E., Kraimer, M. L., & Crant, J. M. (2001). What do proactive people do? A longitudinal model linking proactive personality and career success. *Personnel psychology, 54*(4), 845-874.

Sekaran, U. (2003). Towards a guide for novice research on research methodology: Review and proposed methods. *Journal of Cases of Information Technology, 8*(4), 24-35.

Sekaran, U., & Bougie, R. (2010). Research Methods for Small Business. *A Skill Building Approach*.

Sekaran, U., & Bougie, R. (2016). *Research methods for business: A skill building approach*: John Wiley & Sons.

Seltman, H. J. (2012). Experimental design and analysis. *Online at: http://www. stat. cmu. edu/, hseltman/309/Book/Book. pdf*.

Sepdiningtyas, R., & Santoso, C. B. (2017). The influence of leader-member exchange on individual performance: The roles of work engagement as a mediating variable and co-workers support as a moderating variable. *Review of Integrative Business and Economics Research, 6*(4), 285.

Shalley, C. E., Zhou, J., & Oldham, G. R. (2004). The effects of personal and contextual characteristics on creativity: Where should we go from here? *Journal of management, 30*(6), 933-958.

Shanker, R., Bhanugopan, R., Van der Heijden, B. I., & Farrell, M. (2017). Organizational climate for innovation and organizational performance: The mediating effect of innovative work behavior. *Journal of vocational behavior, 100*, 67-77.

Shipton, H., West, M. A., Dawson, J., Birdi, K., & Patterson, M. (2006). HRM as a predictor of innovation. *Human resource management journal, 16*(1), 3-27.

Sitienei, P. J. (2015). D61/61469/2013.

Smidts, A., Pruyn, A. T. H., & Van Riel, C. B. (2001). The impact of employee communication and perceived external prestige on organizational identification. *Academy of management journal, 44*(5), 1051-1062.

Sok, P., & O'Cass, A. (2015). Achieving service quality through service innovation exploration–exploitation: the critical role of employee empowerment and slack resources. *Journal of Services Marketing, 29*(2), 137-149.

Sonnentag, S. (2003). Recovery, work engagement, and proactive behavior: a new look at the interface between nonwork and work. *Journal of Applied psychology, 88*(3), 518.

Spence Laschinger, H. K., Wong, C. A., Grau, A. L., Read, E. A., & Pineau Stam, L. M. (2012). The influence of leadership practices and empowerment on Canadian nurse manager outcomes. *Journal of Nursing Management, 20*(7), 877-888.

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

Stander, M. W., & Rothmann, S. (2010). Psychological empowerment, job insecurity and employee engagement. *SA Journal of Industrial Psychology, 36*(1), 1-8.

Stanley, J., & Mann, A. (2014). A theoretical framework for employer engagement *Understanding employer engagement in education* (pp. 54-70): Routledge.

Statistics, L. (2015). Statistical tutorials and software guides.

Steinmann, B., Ötting, S. K., & Maier, G. W. (2016). Need for affiliation as a motivational add-on for leadership behaviors and managerial success. *Frontiers in psychology, 7*, 1972.

Stevens, J. (2002). Applied multivariate statistics for the social sciences. New Jersey: Lawrance Erlbaum Association: Inc.

Stoffers, J., & Van der Heijden, B. (2009). Towards an HRM Model predicting organisational performance by enhancing innovative work behaviour: A study among Dutch SMEs in the province of Limburg.

Sundaray, B. K. (2011). Employee engagement: A driver of organizational effectiveness. *European Journal of Business and Management, 3*(8), 53-59.

Tabachnick, B. G., & Fidell, L. S. (2007). Using multivariate statistics Boston. *MA: Allyn and Bacon, 5*, 2007.

Tabachnick, B. G., & Fidell, L. S. (2013). Using multivariate statistics, 6th edn Boston. *Ma: Pearson*.

Taherdoost, H. (2016). Sampling methods in research methodology; How to choose a sampling technique for research.

Takeuchi, R., Lepak, D. P., Wang, H., & Takeuchi, K. (2007). An empirical examination of the mechanisms mediating between high-performance work systems and the performance of Japanese organizations. *Journal of Applied psychology, 92*(4), 1069.

Tastan, S., & Davoudi, S. M. M. (2015). An examination of the relationship between leader-member exchange and innovative work behavior with the moderating role of trust in leader: A study in the Turkish context. *Procedia-Social and Behavioral Sciences, 181*(11), 23-32.

Teclemichael Tessema, M., & Soeters, J. L. (2006). Challenges and prospects of HRM in developing countries: testing the HRM–performance link in the Eritrean civil service. *The International Journal of Human Resource Management, 17*(1), 86-105.

Teruel, M., & Segarra, A. (2017). The link between gender diversity and innovation: What is the role of firm size?". *International Review of Entrepreneurship, 15*(3), 319-340.

Tims, M., Bakker, A. B., & Xanthopoulou, D. (2011). Do transformational leaders enhance their followers' daily work engagement? *The Leadership Quarterly, 22*(1), 121-131.

Tremblay, D.-G., & Genin, E. (2008). Money, work–life balance and autonomy: why do IT professionals choose self-employment? *Applied Research in Quality of Life, 3*(3), 161-179.

Turinawe, H. (2011). *Reward systems, job satisfaction, organizational commitment and employee performance in public higher institutions of learning in Uganda.* Makerere University.

Ugwu, F. O., Onyishi, I. E., & Rodríguez-Sánchez, A. M. (2014). Linking organizational trust with employee engagement: The role of psychological empowerment. *Personnel review, 43*(3), 377-400.

ul Haq, M. A., Usman, M., & Khalid, S. (2018). Employee Empowerment, Trust, and Innovative Behavior: Testing a Path Model. *Journal on Innovation and Sustainability, 9*(2), 3-11.

Unsworth, K., Clegg, C., & Stream, U. (2004). *The use of diary methods to study new questions in employee innovation.* Paper presented at the Proceedings, 18th Annual Australian New Zealand Academy of Management Conference.

Uzunbacak, H. H. (2015). The Impacts of Employee Empowerment on Innovation: A Survey on Isparta And Burdur Organized Industrial Zones. *Journal of International Social Research, 8*(37).

Vacharakiat, M. (2008). *The relationships of empowerment, job satisfaction, and organizational commitment among Filipino and American registered nurses working in the USA.*

van Vuuren, M., de Jong, M. D., & Seydel, E. R. (2007). Direct and indirect effects of supervisor communication on organizational commitment. *Corporate Communications: An International Journal, 12*(2), 116-128.

Velasco, E., Zamanillo, I., & Del Valle, T. G. (2013). Mobilizing company members' full innovative potential. *Human factors and ergonomics in manufacturing & Service industries, 23*(6), 541-559.

Verhoest, K., Verschuere, B., & Bouckaert, G. (2007). Pressure, legitimacy, and innovative behavior by public organizations. *Governance, 20*(3), 469-497.

Vithayaporn, S., & Ashton, A. S. (2019). Employee Engagement and Innovative Work Behavior: A Case Study of Thai Airways International. *ABAC ODI JOURNAL VISION. ACTION. OUTCOME., 6*(2), 45-62.

Wadhwa, D. S., & Verghese, M. (2015). Impact of employee empowerment on job satisfaction and organizational commitment: An empirical investigation with special reference to selected cement industry in Chhattisgarh. *International Journal in Management and Social Science, 3*(3), 280-286.

Wagner, S. H., Parker, C. P., & Christiansen, N. D. (2003). Employees that think and act like owners: Effects of ownership beliefs and behaviors on organizational effectiveness. *Personnel psychology, 56*(4), 847-871.

Wall, T. D., Wood, S. J., & Leach, D. J. (2004). Empowerment and performance. *International review of industrial and organizational psychology, 19*, 1-46.

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

Wan, X., Wang, W., Liu, J., & Tong, T. (2014). Estimating the sample mean and standard deviation from the sample size, median, range and/or interquartile range. *BMC medical research methodology, 14*(1), 135.

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.

West, M. A. (2002). Sparkling fountains or stagnant ponds: An integrative model of creativity and innovation implementation in work groups. *Applied psychology, 51*(3), 355-387.

West, M. A., & Anderson, N. R. (1996). Innovation in top management teams. *Journal of Applied psychology, 81*(6), 680.

Wong Humborstad, S., I, Nerstad, C., GL, & Dysvik, A. (2014). Empowering leadership, employee goal orientations and work performance: A competing hypothesis approach. *Personnel review, 43*(2), 246-271.

Xerri, M. (2013). Workplace relationships and the innovative behaviour of nursing employees: a social exchange perspective. *Asia Pacific Journal of Human Resources, 51*(1), 103-123.

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.

Yamane, T. (1973). Statistics: An introductory analysis.

Yang, J.-S., & Chen, C.-y. (2005). Systemic design for improving team learning climate and capability: A case study. *Total Quality Management & Business Excellence, 16*(6), 727-740.

Yeoh, K. K., & Mahmood, R. (2013). The relationship between pro-innovation organizational climate, leader-member exchange and innovative work behavior: A study among the knowledge workers of the knowledge intensive business services in Malaysia. *Business Management Dynamics*, *2*(8), 15-30.

Yin, R. (2003). Designing case studies. *Qualitative Research Methods*, 359-386.

Yong, A. G., & Pearce, S. (2013). A beginner's guide to factor analysis: Focusing on exploratory factor analysis. *Tutorials in quantitative methods for psychology*, *9*(2), 79-94.

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.

Zainol, S., Mohd-Hussin, S., & Othman, M. (2016). Determinants of employee engagement in hotel industry in Malaysia. A theoretical model. *International Journal of Academic Research in Accounting, Finance and Management Sciences*, *6*(3), 1-9.

Zerfass, A., & Huck, S. (2007). Innovation, communication, and leadership: New developments in strategic communication. *International Journal of Strategic Communication*, *1*(2), 107-122.

Zhang, Y., & Begley, T. M. (2011). Power distance and its moderating impact on empowerment and team participation. *The International Journal of Human Resource Management*, *22*(17), 3601-3617.

Zohrabi, M. (2013). Mixed Method Research: Instruments, Validity, Reliability and Reporting Findings. *Theory & practice in language studies*, *3*(2).

APPENDICES

Appendix I: Questionnaire

SECTION A: EMPLOYEE EMPOWERMENT DIMENSIONS

Using the scale items below, indicate the extent to which you disagree or agree with the following statements about Employee empowerment in your firm (by indicating X in appropriate space). Please rate the following on a scale of SD to SA.

Key: 1.SD=strongly disagree, 2.D= disagree, 3.N=neutral, 4.A= agree, 5.SA = strongly agree

POWER		**SD 1**	**D 2**	**N 3**	**A 4**	**SA 5**
P1	My organization encourages participative decision making					
P2	My organization gives employees control over resources they need to accomplish their work					
P3	My organization allows authority to be delegated equally to all levels of responsibility					
P4	My organization encourages employees to take self-initiative					
P5	My organization allows employees to use their own discretion in carrying out work assignments					
INFO RMATION		**SD**	**D**	**N**	**A**	**SA**
I1	Employees get information they need for their work at the shortest time possible					
I2	My organization gives employees feedback about their performance					
I3	My organization frequently communicate relevant job information to employees					
I4	My organization regularly supplies information to employees about the performance of our competitors					
I5	My organization encourages two-way communication					
KNO WLEDGE		**SD**	**D**	**N**	**A**	**SA**
K1	In my organization supervisors share knowledge with support staff					
K2	My organization encourages employees to utilize knowledge acquired to solve work related problems					
K3	My organization encourage employees gain and share knowledge through learning and practice					
K4	My organization recognizes and makes use of my abilities and skills					
K5	Employees are provided with an opportunity to learn on their jobs					
REW ARDS		**SD**	**D**	**N**	**A**	**SA**
R1	My organization rewards employees for acquiring new knowledge and skill					
R2	I am satisfied with the pay I get from the organization					
R3	My organization rewards every employee according to their work efforts					
R4	My organisation gives cash award for performance periodically					
R5	My organization usually organizes small non-cash awards e.g, dinners and trips for its staff					

SECTION B: EMPLOYEE ENGAGEMENT DIMENSIONS

Using the scale items below, indicate the extent to which you disagree or agree with the following statements about Employee empowerment in your firm (by indicating X in appropriate space). Please rate the following on a scale of SD to SA.

Key: SD=strongly disagree, D= disagree, N=neutral, A= agree, SA = strongly agree

	EMPLOYEE ENGAGEMENT	**SD**	**D**	**N**	**A**	**SA**
EE1	I exert maximum effort while undertaking my tasks					
EE2	I always look forward to coming to work					
EE3	I try my hardest to perform well on my job					
EE4	At work, my mind is focused on my job					
EE5	I feel strong and vigorous at the place of work.					
EE6	I exert a lot of energy on my work.					
EE7	I feel happy when I am working intensely.					
EE8	I always look for developmental opportunities that enhance the value of the organization.					
EE9	It is difficult to detach myself from my job					
EE10	When I am working, I forget everything else around me.					
EE11	I find the work that I do meaningful and purposeful.					
EE12	I am proud of the work that I do.					

SECTION C: LEADER MEMBER EXCHANGE DIMENSIONS

Using the scale items below, indicate the extent to which you disagree or agree with the following statements about Employee empowerment in your firm (by indicating X in appropriate space). Please rate the following on a scale of SD to SA.

Key: SD=strongly disagree, D= disagree, N=neutral, A= agree, SA = strongly agree

	LEADER MEMBER EXCHANGE	**SD**	**D**	**N**	**A**	**SA**
LMX1	I feel that my immediate supervisor understands my problems and needs					
LMX2	My immediate supervisor recognizes my potential					
LMX3	Regardless of how much formal authority my immediate supervisor has in his position, he helps me to solve work related problems					
LMX4	Regardless of the amount of formal authority my immediate supervisor has, I can count on him or her to "bail me out" at his or her expense when I really need it					

LMX5	I do work for my supervisor that goes beyond what is specified in my job description					
LMX6	My supervisor is the kind of person one would like to have as a friend.					
LMX7	I am willing to apply extra efforts beyond those normally required to help my supervisor meet his or her work goals.					
LMX8	I respect my supervisor's knowledge of and competence on the job.					

SECTION D: INNOVATIVE WORK BEHAVIOUR DIMENSIONS

Using the scale items below, indicate the extent to which you disagree or agree with the following statements about Employee empowerment in your firm (by indicating X in appropriate space). Please rate the following on a scale of SD to SA.

Key: SD=strongly disagree, D= disagree, N=neutral, A= agree, SA = strongly agree

INNOVATIVE WORK BEHAVIOUR		**SD**	**D**	**N**	**A**	**SA**
IWB1	I look for an opportunity to improve on existing products, process, technology and work relationships					
IWB2	I recognize opportunities to make a positive difference in my work, organization, department and customers					
IWB3	I pay attention to non-routine issues in my work, department and organisation					
IWB4	I search out for new work methods, techniques or instruments					
IWB5	I feel that I am good at finding new approaches of executing my tasks					
IWB6	I encourage key organization members to be enthusiastic about innovative ideas					
IWB7	I attempt to convince people to support innovative ideas					
IWB8	I systematically introduce innovative ideas into work					
IWB9	I contribute to implementation of new ideas					
IWB10	I put effort into development of new things					

SECTION E: GENERAL INFORMATION

Please answer the following questions by placing a tick(√) in the appropriate block .

1. Indicate your gender Male□ Female □

2. What is your highest level of education?

Certificate□ Diploma□ Bachelor's Degree□ Postgraduate□

3. What is your age bracket?

Less than 20 years □ 21-25 □ 26-30 □ 31-35 □ Over 35 □

4. How long have been working in the firm?

1-5 □ 6-10 □ 11-15 □ 16-20 □ Over 21 □

*****THANK YOU *****

Appendix II: Introduction Letter from Moi University

MOI UNIVERSITY
DEAN SCHOOL OF BUSINESS AND ECONOMICS

Tel: (053) 43620
Fax No: (053) 43360
Telex No. 35047 MOI VARSITY

Box 3900
Eldoret
KENYA

Ref: SBE/DPHIL/BM/021/15

19th March, 2019

TO WHOM IT MAY CONCERN:

Dear Sir/Madam,

MERCY KANANU KANAKE – SBE/DPHIL/BM/021/15

This is to certify that the above named is a bonafide student of Moi University, School of Business and Economics and is enrolled in Doctor of Philosophy in Business Management, Specializing in Strategic Management.

She has Completed Course Work, Defended her Proposal at School level, and due to Proceed to the Field to Collect Data.

Any assistance accorded to her will be highly appreciated.

Yours sincerely,

DEAN
School Of Business and Economics
MOI UNIVERSITY

DR. JOEL K. TENAI
Ag. DEAN, SCHOOL OF BUSINESS AND ECONOMICS

Appendix III: Researchers Letter of Introduction

INTRODUCTION LETTER

Moi University
School of Business
Department of Management Sciences
P.O. Box 3900-00300
ELDORET

14th May 2019

Dear respondent,

I am a Ph.D. student at the School of Business & Economics of Moi University, Eldoret conducting a study entitled "**Effect of employee empowerment, leader-member exchange, engagement and innovative work behaviour in manufacturing firms in Nairobi"** as part of the requirement for the award of PhD in Strategic Management degree.

Your organization falls within the population of interest and therefore request that you participate by filling in the questionnaire. The information you give is purely for academic purposes and will be treated with utmost confidentiality. Your participation in this study will be valuable as it will contribute to the achievement of the study objectives.

Yours faithfully,

Mercy K. Kanake
Tel: +254-720701673

Appendix IV: Research License

THIS IS TO CERTIFY THAT:
MS. MERCY KANANU KANAKE
of MOI UNIVERSITY, 0-30100 Eldoret,has been permitted to conduct research in *Nairobi County*

on the topic: *EFFECT OF LEADER-MEMBER EXCHANGE AND EMPLOYEE ENGAGEMENT ON THE RELATIONSHIP BETWEEN EMPLOYEE EMPOWERMENT AND EMPLOYEE INNOVATIVE WORK BEHAVIOR IN MANUFACTURING FIRMS IN NAIROBI*

for the period ending:
12th April,2020

.....
Applicant's Signature

Permit No : NACOSTI/P/19/9975/29079
Date Of Issue : 12th April,2019
Fee Recieved :Ksh 2000

.....
Director General
National Commission for Science, Technology & Innovation

THE SCIENCE, TECHNOLOGY AND INNOVATION ACT, 2013

The Grant of Research Licenses is guided by the Science, Technology and Innovation (Research Licensing) Regulations, 2014.

CONDITIONS

1. The License is valid for the proposed research, location and specified period.
2. The License and any rights thereunder are non-transferable.
3. The Licensee shall inform the County Governor before commencement of the research.
4. Excavation, filming and collection of specimens are subject to further necessary clearance from relevant Government Agencies.
5. The License does not give authority to transfer research materials.
6. NACOSTI may monitor and evaluate the licensed research project.
7. The Licensee shall submit one hard copy and upload a soft copy of their final report within one year of completion of the research.
8. NACOSTI reserves the right to modify the conditions of the License including cancellation without prior notice.

National Commission for Science, Technology and innovation
P.O. Box 30623 - 00100, Nairobi, Kenya
TEL: 020 400 7000, 0713 788787, 0735 404245
Email: dg@nacosti.go.ke, registry@nacosti.go.ke
Website: www.nacosti.go.ke

REPUBLIC OF KENYA

NACOSTI

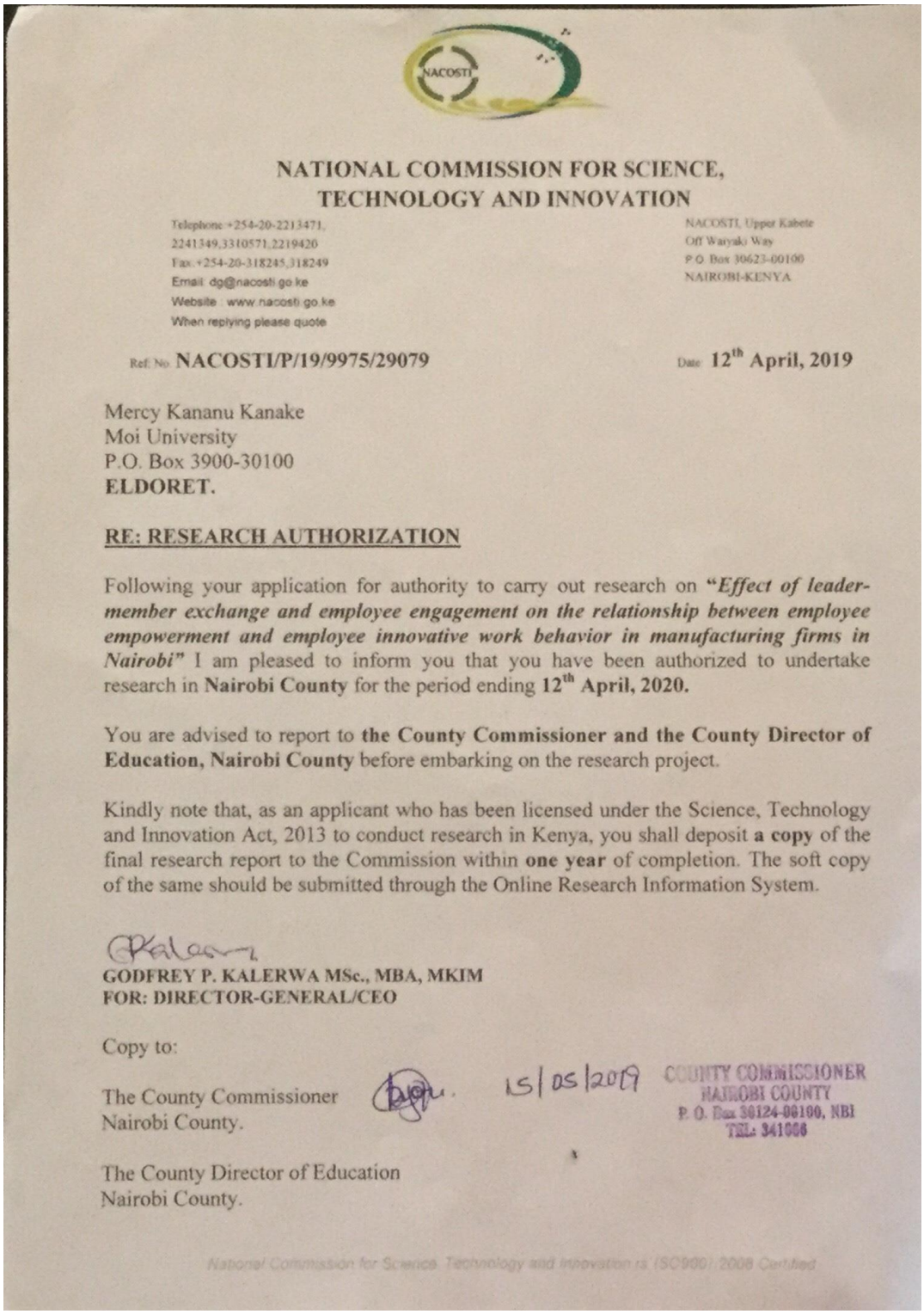
National Commission for Science, Technology and Innovation

RESEARCH LICENSE

Serial No.A 24027

CONDITIONS: see back page

Appendix V: Research Authorization



NATIONAL COMMISSION FOR SCIENCE,
TECHNOLOGY AND INNOVATION

Telephone: +254-20-2213471,
2241349,3310571,2219420
Fax: +254-20-318245,318249
Email: dg@nacosti.go.ke
Website : www.nacosti.go.ke
When replying please quote

NACOSTI, Upper Kabete
Off Waiyaki Way
P.O. Box 30623-00100
NAIROBI-KENYA

Ref No: **NACOSTI/P/19/9975/29079** Date: **12th April, 2019**

Mercy Kananu Kanake
Moi University
P.O. Box 3900-30100
ELDORET.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on ***"Effect of leader-member exchange and employee engagement on the relationship between employee empowerment and employee innovative work behavior in manufacturing firms in Nairobi"*** I am pleased to inform you that you have been authorized to undertake research in **Nairobi County** for the period ending **12th April, 2020.**

You are advised to report to **the County Commissioner and the County Director of Education, Nairobi County** before embarking on the research project.

Kindly note that, as an applicant who has been licensed under the Science, Technology and Innovation Act, 2013 to conduct research in Kenya, you shall deposit **a copy** of the final research report to the Commission within **one year** of completion. The soft copy of the same should be submitted through the Online Research Information System.

GODFREY P. KALERWA MSc., MBA, MKIM
FOR: DIRECTOR-GENERAL/CEO

Copy to:

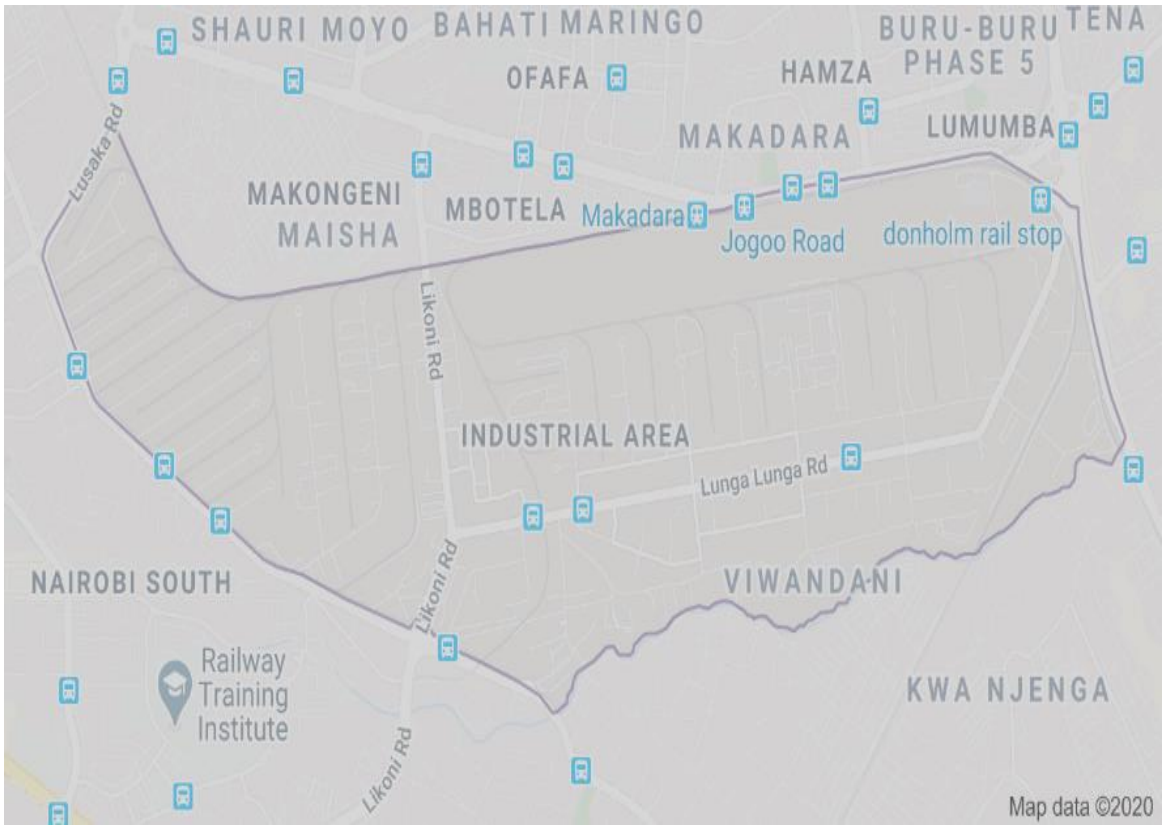
The County Commissioner
Nairobi County.

15/05/2019
COUNTY COMMISSIONER
NAIROBI COUNTY
P. O. Box 30124-00100, NBI
TEL: 341066

The County Director of Education
Nairobi County.

National Commission for Science, Technology and Innovation is ISO9001:2008 Certified

Appendix VI: Nairobi Industrial Area Map



Appendix VII: List of Manufacturing Firms in Nairobi, Kenya

Building, Construction and Mining sector (9)	
Company	**Company**
Central Glass Industries	Kenbro Industries Ltd
Bamburi Cement Ltd	Kenya Builders & Concrete
Manson Hart Kenya	Saj Ceramics Ltd
International Energy Technik Ltd	Orbit Enterprises Ltd
Karsan Murji & Co. Ltd	
Chemical and Allied Sector (54)	
Anffi Kenya Ltd	Match Masters Ltd
Basco Products Ltd	Metoxide Africa
Bayer East Africa Ltd	Murphy Chemicals Ltd
Belersdorf East Africa Ltd	Odex Chemicals Ltd
Blue King Products Ltd	Orbit Chemicals Industries Ltd
BOC Kenya Ltd	Osho Chemicals Industries Ltd
Buyline Industries Ltd	Murphy Chemicals Ltd
Carbacid (CO2) Ltd	Chemical and Solvents (E.A.) Ltd
Continental Products Ltd	Procter & Gamble E. A. Ltd
Cooper K-Brands Ltd	Pyrethrum Board of Kenya
Crown Gases Ltd	PZ Cussons E.A. Ltd
Crown Paints (Kenya) Ltd	Reckitt Benckiser (E.A.) Ltd
Colgate palmolive	Revolution Stores Ltd
Decase Chemicals Ltd	Rumoth Group of Co. Ltd
Deluxe Inks Ltd	Sadolin Paints (E.A.) Ltd
Desbro Kenya Ltd	Strategic Industries Ltd
Elex Products Ltd	Soilex prosolve
Eveready Batteries East Africa Ltd	Chemigas Kenya LTD
Syngenta E.A. Ltd	Superfoam Ltd
Galaxy Paints and Coating Co.	Synresins Ltd
Grand Paints Ltd	Sara Lee
Haco Tiger Brands (E.A.) Ltd	Tri-Clover Industries (K) Ltd
Henkel Kenya Ltd	Tropikal Brand
Interconsumer Products Ltd	Twiga Chemical Industries
Johnson Diversey E.A. Ltd	Unilever E. and Southern Africa
Kel Chemicals Ltd	Vitafoam Products Ltd
Ken Nat Ink & Chemicals	Maroo Polymers Ltd
Energy, Electricals and Electronics (29)	
Amedo Centre Kenya Ltd	Meltex International Ltd
Assa Abloy E.A. Ltd	Module Engineering Systems
Aucma Digital Technology Africa Ltd	Mustek E.A. Ltd
Avery E.A. Ltd	Nationwide Electrical Industries
Baumann Engineering Ltd	Marshall Fowler Engineers
Centurion Systems Ltd	PCTL Automation Ltd
Digitech E.A. Ltd	Pentagon Agencies
East Africa Cables Ltd	Power Technics Ltd
Holman Brothers (E.A.) Ltd	Manufacturers and Supplies (K) Ltd
IberaAfrica Power (E.A.) Ltd	Reliable Electricals Engineers (Ltd)
International Energy Technik	Socabelec (E.A.) Ltd

Karani Biofuel
Kenwest Cables Ltd
Kenya Petroleum Refineries
Kenya Power Ltd
Specialized Power Systems Ltd
Synergy - Pro
Virtual City Ltd

Food and Beverages (77)

Africa Spirits Ltd
Agriner Agricultural Development
Al-Mahra Industries Ltd
Alpha Fine Foods Ltd
Alpine Coolers Ltd
Aquamist Ltd
Belfast Millers Ltd
The Breakfast Cereal Co. (K) Ltd
C. Czarnikow Sugar E.A.
Cadbury Kenya Ltd
Candy Kenya Ltd
Chirag Kenya Ltd
Coca-Cola East & Central Ltd
E.A. Breweries Ltd
E.A. Sea Food Ltd
Erdermann Co. (K) Ltd
Excel Chemicals Ltd
Farmers Choice Ltd
Frigoken Ltd
Gil Oil Co. Ltd
Glaciers Products
Global Fresh Ltd
Rafiki Millers Ltd
Gonas Best Ltd
Highlands Canners Ltd
Insta Products (EPZ) Ltd
Jambo Biscuits (K) Ltd
Kamili Packers Ltd
Kapa Oil Refineries Ltd
Kenafric Industries Ltd
Kenya Breweries
Kenya Nut Co. Ltd
Kuguru Food Complex
British American Tobacco
Kenya Seed Company
Pristine International
Kenya Sweets Ltd
Deepa Industries
DPL Festive Ltd
New Kenya Co-operative Cremaries
Kenya Wine Agencies Ltd
Kevian Kenya Ltd
Koba Waters Ltd
Kwality Candies & Sweets Ltd
London Distillers (K) Ltd
Manji Food Industries Ltd
Mastermind Tobacco (K) Ltd
Melvin Marsh International
Mini Bakeries (Nbi) Ltd
Miritini Kenya Ltd
Nairobi Bottlers Ltd
Nairob Flour Mills Ltd
NAS Airport Services Ltd
Nestle Foods Kenya Ltd
Palmhouse Diairies Ltd
Patco Industries Ltd
Pearl Industries Ltd
Pembe Flour Mills Ltd
Premier Flour Mills Ltd
Premier Food Industries Ltd
Proctor & Allan (E.A.) Ltd
Promasidor Kenya Ltd
Razco Ltd
Re-Suns Spices Ltd
Spice World Ltd
Sigma Supplies Ltd
Trufoods Ltd
Unga Group Ltd
UDV Kenya
Fresh Produce Exporters Association of Kenya
Usafi Services Ltd
Valuepack Foods
Trufoods Ltd
W. E. Tilley (Muthaiga) Ltd
Wrigley Co. (E.A.) Ltd
C. Dormans
Europack Industries

Leather and Footwear (2)

Sandstorm Africa Ltd
C & P Shoe Industries Ltd

Metal and Allied Sector (42)

Allied East Africa Ltd
Alloy Steel Casting Ltd
Apex Steel Ltd
ASL Limited - Steel Division
SP Co. Ltd
Athi River Steel Plant
City Engineering Works (K) Ltd
Corrugated Sheets Ltd
Hobra Manufacturing Ltd
Davis & Shirtliff Ltd
Devki Steel Mills Ltd
Doshi Enterprises Ltd
East Africa Spectre Ltd
East Africa Foundry Works (K) Ltd
Elite Tools
Farm Engineering Industries Ltd
Friendship Container Manufacturers Ltd
General Aluminum Fabricators Ltd
Heavy Engineering Ltd
Metal Crowns Ltd
Nail & Steel Products Ltd
Orbit Engineering Ltd
Rolmil Kenya Ltd
Sheffield Steel Systems Ltd
Specialized Engineering Co. (E.A.) Ltd
Hobra Manufacturing Ltd
Insteel Ltd
Kaluworks Ltd
Kens Metal Industries
Khetshi Dharamshi & Co. Ltd
Hobra Manufacturing Ltd
Napro Industries Ltd
Mecol Ltd
Steel Structures Ltd
Steel Makers Ltd
Steel Wool (Africa) Ltd
Tononoka Steel Ltd
Viking Industries Ltd
Warren Enterprises Ltd
Welding Alloys Ltd
Wire Products Ltd
Nail & Steel Products Ltd

Motor Vehicle and Accessories (17)

Associated Battery Manufacturers EA Ltd
Auto Ancillaries Ltd
Auto Springs Manufacturers Ltd
Bhachu Industries Ltd
Isuzu Kenya
Varsani Brakenlinings Ltd
General Motors E.A. Ltd
Impala Glass Industries Ltd
Kenya Grange Vehicle Industries Ltd
Mann Manufacturing Co. Ltd
Megh Cushion Industries Ltd
Mutsimoto Co. Ltd
Pipe Manufacturers Ltd
Sohansons Ltd
Theevan Enterprises Ltd
Toyota Kenya Ltd
Unifilters Kenya Ltd

Paper and Board (45)

Allpack Industries Ltd
Bags and Balers Manufacturers (k) Ltd
Brand Printers Ltd
Carton Manufacturers Ltd
Cempack Solutions Ltd
Chandaria Industries Ltd
Colour Labels Ltd
Colour Packaging Ltd
National Printing Press Ltd
Colour Print Ltd
D.L. Patel Press Ltd
Kenafric Diaries Manufacturers Ltd
Kenya Litho Ltd
Kenya Stationers Ltd
Kim - Fay E.A. Ltd
Kul Graphics Ltd
L.A.B. International Kenya Ltd
Modern Lithographic (K) Ltd
Nation Media Group Ltd - Printing Plant
Paperbags Ltd
Phonexi Matches Ltd
Printpak Multi Packaging Ltd

Dodhia Packaging Ltd
E.A. Packaging Industries Ltd
Elite Offset Ltd
Ellams Products Ltd
English Press Limited
Kartasi Industries Ltd
General Printers Ltd
Graphics and Allied Ltd
Guaca Stationers Ltd
Icons Printers Ltd
Interlables Africa Ltd
Paper House of Kenya Ltd
Printwell Industries Ltd
Punchlines Ltd
Ramco Printing Works Ltd
Regal Press Kenya Ltd
Tetra Pak Ltd
The Rodwell Press Ltd
Uneeco Paper Products Ltd
Autolitho Ltd
Bag and Envelope Converters
Jomo Kenyatta Foundation
Associated Paper & Stationery

Pharmaceutical and Medical Equipment (19)

African Cotton Industries Ltd
Alpha Medical Manufacturers
Beta Healthcare Ltd
Cosmos Ltd
Dawa Ltd
Elys Chemical Industries Ltd
Glaxo Smithkline Kenya Ltd
KAM industries
Bulk Medicals
KAM Pharmacy
Manhar Brothers (k) Ltd
Medivet Products Ltd
Novelty Manufacturing Ltd
Osschemie (k) Ltd
Pharm Access Africa Ltd
Pharmaceutical Manufacturing Co.
Regal Pharmaceuticals Ltd.
Laboratory & Allied Ltd
Biodeal Laboratories Ltd

Plastics and Rubber (56)

ACME Containers Ltd
Afro Plastics (k) Ltd
Betatrad (K) Ltd
Bobmil Industries Ltd
Complast Industries Ltd
Dune Packaging Ltd
Elgitread (Kenya) Ltd
Elgon Kenya Ltd
Eslon Plastics of Kenya Ltd
Five Star Industries Ltd
General Plastics Ltd
Hi-Plast Ltd
Jamlam Industries Ltd
Kamba Manufacturing (1986) Ltd
Kenpoly Manufacturers Ltd
Kentainers Ltd
L.G. Harris & Co. Ltd
Laneeb Plastic Kenya Ltd
Metro Plastics Kenya Ltd
Nairobi Plastics Ltd
Ombi Rubber Rollers Ltd
Packaging Industries Ltd
Polythene Industries
Packaging Masters Ltd
Plastic Electricons
Plastic & Rubber Industries
Polyblend Ltd
Rubber Products Ltd
Safepak Ltd
Sameer Africa Ltd
Sanpac Africa Ltd
Signode Packaging Systems Ltd
Silpack Industries Ltd
Solvochem E.A. Ltd
Spring box Kenya Ltd
Sumaria Industries
Super Manufacturers
Techpak Industries Ltd
Treadsetters Tyres Ltd
Uni - Plastics Ltd
Wonderpac Industries Ltd
Pollyflex Industries
Prosel Ltd
Haco Tiger Brands
King Plastics Industries
Abcos Industrial Co Ltd

Textiles and Apparels (21)	
Alltex EPZ Ltd	Ngecha Industries Ltd
Alpha Knits Ltd	Alliance Garment Insustries
Apex Apparels (EPZ) Ltd	Supra textiles
Fantex (K) Ltd	Spin Knit Ltd
Unified Aryan (EPZ) Ltd	Spinners & Spinners Ltd
Karivondo Filaments Ltd	Straightline Enterprises
Kenya Trading (EPZ) Ltd	Sunflag Textile & Knitwear Mills Ltd
Kikoy Co. Ltd	Tarpo Industries Ltd
Le Stud Ltd	Teita Estate Ltd
Midco Textiles (EA) Ltd	Thika Cloth Mills Ltd
Vajas Manufacturers Ltd	
Timber, Wood and Furniture (16)	
Economic Housing Group Ltd	Rosewood Furniture manufacturers
Fine Wood Works Ltd	Shah Timber Mart Ltd
Kenya Wood Ltd	Shamco Industries Ltd
Newline Ltd	Statpack Industries
PG Bison Ltd	Timsales Ltd
Furniture International Ltd	Taws Ltd
Woodtex Kenya Ltd	Twiga Stationers
Tetra Pack Ltd	Woodmakers Kenya

Source: Kenya Association of Manufacturers Directory 2018

Appendix VIII: Missing Data

81	1	1.9	-							
229	1	1.9	-					-	-	
104	1	1.9				-				-
249	1	1.9						S		
70	1	1.9								
55	1	1.9						-		
281	1	1.9							-	
133	1	1.9	-							
61	1	1.9								-
283	2	3.7								
311	4	7.4								
11	3	5.6								
209	3	5.6								
312	3	5.6								
296	5	9.3							S	
47	4	7.4								
94	7	13.0				-		-		
195	7	13.0	-							
314	12	22.2								
110	15	27.8								
315	34	63.0								
291	35	64.8	S	S	S	S	S	S	S	S

- indicates an extreme low value, while + indicates an extreme high value. The range used is (Q1 - 1.5*IQR, Q3 + 1.5*IQR).

a. Cases and variables are sorted on missing patterns.

Appendix IX: Factor Analysis Results

Employee Empowerment

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.909
Bartlett's Test of Sphericity	Approx. Chi-Square	3031.684
	df	190
	Sig.	.000

Total Variance Explained

Component	Initial Eigenvalues			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	6.996	34.982	34.982	3.916	19.582	19.582
2	2.103	10.513	45.495	2.739	13.694	33.276
3	1.386	6.932	52.427	2.504	12.521	45.797
4	1.121	5.607	58.035	2.448	12.238	58.035
5	.988	4.941	62.976			
6	.817	4.084	67.060			
7	.695	3.476	70.536			
8	.638	3.189	73.725			
9	.616	3.079	76.804			
10	.540	2.702	79.505			
11	.507	2.533	82.039			
12	.486	2.432	84.471			
13	.462	2.309	86.780			
14	.449	2.246	89.027			
15	.426	2.130	91.157			
16	.413	2.067	93.224			
17	.388	1.939	95.163			
18	.366	1.831	96.995			
19	.331	1.654	98.649			
20	.270	1.351	100.000			

Extraction Method: Principal Component Analysis.

Employee engagement

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.893
Bartlett's Test of Sphericity	Approx. Chi-Square	1686.363
	df	66
	Sig.	.000

Total Variance Explained

Component	Initial Eigenvalues			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.078	42.318	42.318	3.540	29.503	29.503
2	1.372	11.433	53.751	2.910	24.248	53.751
3	.928	7.736	61.487			
4	.718	5.983	67.470			
5	.688	5.730	73.200			
6	.633	5.274	78.474			
7	.543	4.527	83.001			
8	.497	4.141	87.142			
9	.445	3.707	90.849			
10	.416	3.463	94.312			
11	.383	3.189	97.502			
12	.300	2.498	100.000			

Extraction Method: Principal Component Analysis.

LMX

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.828
Bartlett's Test of Sphericity	Approx. Chi-Square	1085.193
	df	28
	Sig.	.000

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.774	47.176	47.176	3.774	47.176	47.176	2.999	37.490	37.490
2	1.139	14.235	61.411	1.139	14.235	61.411	1.914	23.921	61.411
3	.803	10.033	71.444						
4	.623	7.785	79.229						
5	.527	6.586	85.815						
6	.456	5.704	91.519						
7	.404	5.047	96.566						
8	.275	3.434	100.000						

Extraction Method: Principal Component Analysis.

IWB

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.881
Bartlett's Test of Sphericity	Approx. Chi-Square	1408.599
	df	45
	Sig.	.000

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.575	45.751	45.751	4.575	45.751	45.751	3.254	32.542	32.542
2	1.092	10.917	56.668	1.092	10.917	56.668	2.413	24.126	56.668
3	.819	8.186	64.854						
4	.698	6.981	71.835						
5	.675	6.747	78.582						
6	.585	5.850	84.432						
7	.498	4.980	89.412						
8	.402	4.024	93.436						
9	.342	3.420	96.855						
10	.314	3.145	100.000						

Extraction Method: Principal Component Analysis.

Appendix X: Correlation Results

Correlations

		TIWB	TEMPWNT	TENGANT	TLMX
TIWB	Pearson Correlation	1	.510**	.582**	.512**
	Sig. (2-tailed)		.000	.000	.000
	N	384	384	384	384
TEMPWNT	Pearson Correlation	.510**	1	.640**	635**
	Sig. (2-tailed)	.000		.000	.000
	N	384	384	384	384
TENGANT	Pearson Correlation	.582**	.640**	1	.549**
	Sig. (2-tailed)	.000	.000		.000
	N	384	384	384	384
TLMX	Pearson Correlation	.512**	.635**	.549**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	384	384	384	384

**. Correlation is significant at the 0.01 level (2-tailed).

Appendix XI: Hierarchical Linear Regression Results

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistic				
					R Square Change	F Change	df1	df2	
1	.203[a]	.041	.031	.61578	.041	4.083	4	379	
2	.557[b]	.310	.301	.52317	.268	147.043	1	378	
3	.671[c]	.450	.441	.46760	.140	96.185	1	377	

a. Predictors: (Constant), Experience, Gender, Education, Age

b. Predictors: (Constant), Experience, Gender, Education, Age, TLMX

c. Predictors: (Constant), Experience, Gender, Education, Age, TLMX, TEMPWNT

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t
		B	Std. Error	Beta	
1	(Constant)	3.527	.158		22.260
	Gender	-.054	.065	-.042	-.823
	Education	.066	.041	.084	1.617
	Age	.082	.033	.149	2.465
	Experience	.009	.038	.015	.250
2	(Constant)	2.184	.174		12.528
	Gender	-.086	.055	-.068	-1.560
	Education	.021	.035	.027	.615
	Age	.029	.029	.053	1.019
	Experience	-.010	.032	-.016	-.312
	TLMX	.477	.039	.536	12.126
3	(Constant)	1.331	.178		7.456
	Gender	-.081	.050	-.064	-1.642
	Education	.020	.031	.026	.651
	Age	.027	.026	.048	1.039
	Experience	-.030	.029	-.046	-1.022
	TLMX	.205	.045	.231	4.586
	TEMPWNT	.507	.052	.488	9.807

a. Dependent Variable: TENGANT

Appendix XII: Multiple Regression Results

```
Run MATRIX procedure:

*************** PROCESS Procedure for SPSS Version 3.3 ******************

          Written by Andrew F. Hayes, Ph.D.       www.afhayes.com
    Documentation available in Hayes (2018). www.guilford.com/p/hayes3

**************************************************************************
Model  : 4
    Y  : TIWB
    X  : TEMPWNT
    M  : TENGANT

Covariates:
 GENDER   EDUCATIO AGE      EXPERIEN

Sample
Size:  384

**************************************************************************
OUTCOME VARIABLE:
 TENGANT

Model Summary
          R       R-sq        MSE          F        df1        df2          p
       .648       .419       .230     54.616      5.000    378.000       .000

Model
             coeff         se          t          p       LLCI       ULCI
constant      1.440       .181      7.936       .000      1.083      1.797
TEMPWNT        .654       .042     15.690       .000       .572       .736
GENDER        -.071       .051     -1.401       .162      -.171       .029
EDUCATIO       .032       .032       .997       .319      -.031       .094
AGE            .040       .026      1.529       .127      -.011       .091
EXPERIEN      -.030       .030     -1.011       .312      -.088       .028

**************************************************************************
OUTCOME VARIABLE:
 TIWB

Model Summary
          R       R-sq        MSE          F        df1        df2          p
       .608       .369       .200     36.790      6.000    377.000       .000

Model
             coeff         se          t          p       LLCI       ULCI
constant      1.787       .183      9.775       .000      1.427      2.146
TEMPWNT        .209       .050      4.179       .000       .110       .307
TENGANT        .398       .048      8.290       .000       .303       .492
GENDER         .013       .047       .269       .788      -.081       .106
EDUCATIO       .006       .030       .216       .829      -.052       .065
AGE           -.016       .024      -.654       .514      -.064       .032
EXPERIEN      -.007       .028      -.243       .808      -.061       .048

************************** TOTAL EFFECT MODEL ****************************
OUTCOME VARIABLE:
 TIWB

Model Summary
          R       R-sq        MSE          F        df1        df2          p
       .504       .254       .236     25.785      5.000    378.000       .000

Model
             coeff         se          t          p       LLCI       ULCI
constant      2.360       .184     12.839       .000      1.998      2.721
TEMPWNT        .469       .042     11.106       .000       .386       .552
GENDER        -.016       .051      -.302       .763      -.117       .086
EDUCATIO       .019       .032       .590       .555      -.044       .082
AGE            .000       .027      -.003       .997      -.052       .052
EXPERIEN      -.019       .030      -.621       .535      -.078       .040

************** TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y **************
```

```
Total effect of X on Y
     Effect         se          t          p       LLCI       ULCI
       .469       .042     11.106       .000       .386       .552

Direct effect of X on Y
     Effect         se          t          p       LLCI       ULCI
       .209       .050      4.179       .000       .110       .307

Indirect effect(s) of X on Y:
            Effect     BootSE   BootLLCI   BootULCI
TENGANT       .260       .045       .178       .355

************************ ANALYSIS NOTES AND ERRORS ************************

Level of confidence for all confidence intervals in output:
  95.0000

Number of bootstrap samples for percentile bootstrap confidence intervals:
  5000

NOTE: Variables names longer than eight characters can produce incorrect output.
      Shorter variable names are recommended.

------ END MATRIX -----




Run MATRIX procedure:

*************** PROCESS Procedure for SPSS Version 3.3 *******************

          Written by Andrew F. Hayes, Ph.D.       www.afhayes.com
    Documentation available in Hayes (2018). www.guilford.com/p/hayes3

**************************************************************************
Model  : 58
    Y  : ZTIWB
    X  : ZTEMPWNT
    M  : ZTENGANT
    W  : ZTLMX

Covariates:
 GENDER   EDUCATIO AGE      EXPERIEN

Sample
Size:  384

**************************************************************************
OUTCOME VARIABLE:
 ZTENGANT

Model Summary
          R       R-sq        MSE          F        df1        df2          p
       .671       .450       .560     43.966      7.000    376.000       .000

Model
              coeff         se          t          p       LLCI       ULCI
constant       .046       .197       .234       .815      -.342       .434
ZTEMPWNT       .489       .051      9.662       .000       .389       .588
ZTLMX          .231       .050      4.579       .000       .132       .330
Int_1          .000       .034       .005       .996      -.067       .068
GENDER        -.130       .080     -1.635       .103      -.286       .026
EDUCATIO       .032       .050       .650       .516      -.066       .130
AGE            .043       .041      1.038       .300      -.038       .123
EXPERIEN      -.047       .046     -1.019       .309      -.138       .044

Product terms key:
 Int_1    :        ZTEMPWNT x        ZTLMX

Test(s) of highest order unconditional interaction(s):
       R2-chng          F        df1        df2          p
```

```
X*W       .000       .000      1.000    376.000       .996

************************************************************************
OUTCOME VARIABLE:
 ZTIWB

Model Summary
          R       R-sq        MSE          F        df1        df2          p
       .642       .413       .600     32.940      8.000    375.000       .000

Model
              coeff         se          t          p       LLCI       ULCI
constant       .207       .204      1.014       .311      -.195       .609
ZTEMPWNT       .120       .058      2.075       .039       .006       .234
ZTENGANT       .348       .056      6.273       .000       .239       .457
ZTLMX          .245       .054      4.561       .000       .139       .350
Int_1         -.093       .035     -2.685       .008      -.161      -.025
GENDER         .004       .082       .047       .962      -.158       .166
EDUCATIO      -.005       .052      -.089       .929      -.106       .097
AGE           -.041       .043      -.951       .342      -.124       .043
EXPERIEN      -.013       .048      -.267       .789      -.107       .081

Product terms key:
 Int_1    :        ZTENGANT x        ZTLMX

Test(s) of highest order unconditional interaction(s):
       R2-chng          F        df1        df2          p
M*W       .011      7.207      1.000    375.000       .008
----------
    Focal predict: ZTENGANT (M)
          Mod var: ZTLMX    (W)

Conditional effects of the focal predictor at values of the moderator(s):

      ZTLMX     Effect         se          t          p       LLCI       ULCI
     -1.168       .457       .059      7.747       .000       .341       .572
       .074       .341       .056      6.066       .000       .231       .452
      1.033       .253       .074      3.422       .001       .107       .398

****************** DIRECT AND INDIRECT EFFECTS OF X ON Y *****************

Direct effect of X on Y
     Effect         se          t          p       LLCI       ULCI
       .120       .058      2.075       .039       .006       .234

Conditional indirect effects of X on Y:

INDIRECT EFFECT:
 ZTEMPWNT    ->    ZTENGANT    ->    ZTIWB

      ZTLMX     Effect     BootSE   BootLLCI   BootULCI
     -1.168       .223       .057       .109       .331
       .074       .167       .037       .098       .241
      1.033       .123       .049       .040       .233
---

********************** ANALYSIS NOTES AND ERRORS ************************

Level of confidence for all confidence intervals in output:
  95.0000

Number of bootstrap samples for percentile bootstrap confidence intervals:
  5000

W values in conditional tables are the 16th, 50th, and 84th percentiles.

NOTE: Variables names longer than eight characters can produce incorrect output.
      Shorter variable names are recommended.

------ END MATRIX -----
```