LEADER-MEMBER EXCHANGE AND ITS IMPACT ON EMPLOYEE INNOVATIVE WORK BEHAVIOR: AN ANALYSIS OF NEPALESE IT SECTOR

By:

Jagdish Saud

Exam Roll No- 631/18

TU Registration No- 7-3-28-212-2017

A Graduate Research Report submitted to in partial fulfillment of the requirements for the degree of

MASTERS OF BUSINESS ADMINISTRATION

At the

School of Management

Faculty of Management

Tribhuvan University

Kirtipur

September, 2021

RECOMMENDATION

CERTIFICATION

DECLARATION OF AUTHENTICITY

I, Jagdish Saud, declare that this GRP is my own original work and that it has fully and specifically acknowledged wherever adapted from other sources. I also understand that if at any time it is shown that I have significantly misrepresented material presented to SOMTU, any credits awarded to me on the basis of that material may be revoked.

Signature:

Name: Jagdish Saud

Date:

ACKNOWLEDGEMENTS

This thesis report entitled “Leader-Member Exchange and Its Impact on Employee Innovative Work Behavior: An Analysis of Nepalese IT Sector” has been prepared in the partial fulfillment of the requirements of the degree of Masters in Business Administration (MBA), School of Management, Tribhuvan University. I am highly indebted to various people without, their constant help and support this work would be incomplete.

First of all, I would like to extend my sincere gratitude to my supervisor, Dr. Gangaram Biswakarma, Deputy Director of School of Management, Tribhuvan University for his everlasting support, guidance and assistance throughout my research and report writing.

My acknowledgement to Prof. Dr. Puspa Raj Sharma, Director of School of Management, Prof. Dr. Mahananda Chalise, Former Director of School of Management, Dr. Govinda Tamang, Deputy Director of School of Management, Tribhuvan University for their never-ending encouragement to complete this research effectively on time.

I am also extremely thankful to my family, friends and well-wishers who directly and indirectly helped me during the research project.

Finally, I would like to thank School of Management, Tribhuvan University for providing me this opportunity to conduct this research. In the same way, I cannot forget and thank enough to all the respondents for their valuable time and responses for this study, without which this study wouldn’t have been possible.

Jagdish Saud

September, 2021

TABLE OF CONTENT

LIST OF TABLES

LIST OF FIGURES

ABBREVIATIONS

AGFI	Adjusted Goodness-of-fit Index
AFF	Affect
AMOS	Analysis of Moment Structures
ASV	Average Shared Square Variance
AVE	Average Variance Extracted
CFA	Confirmatory Factor Analysis
CFI	Comparative Fit Index
CON	Contribution
CR	Composite Reliability
CSE	Creative Self-Efficacy
Df	Degrees of Freedom
FL	Factor Loading
GFI	Goodness of Fit Index
GRP	Graduate Research Project
ICT	Information and Communication Technology
IFI	Incremental Fit Index
IT	Information Technology
IWB	Innovative Work Behavior
LMX	Leader-Member Exchange
LOY	Loyalty
MSV	Shared Square Variance
PCFI	Parsimony-adjusted CFI
PGFI	Parsimony-adjusted Fit Index
RES	Professional Respect
RMSEA	Root Mean Square Error of Approximation
SD	Standard Deviation
SEM	Structural Equation Modeling
TLI	Tucker–Lewis Index

EXECUTIVE SUMMARY

Companies nowadays must be more innovative than ever before in order to adapt to rapidly changing and highly competitive markets. In these conditions, the role of leadership becomes critical because leaders must encourage employees to be innovative.

This study examined the influence of LMX dimensions and overall LMX quality on employee's innovative work behavior. Additionally, mediating effect of employee's creative self-efficacy between overall LMX quality and employee's innovative work behavior was assessed. Descriptive research has been conducted using online responses collected from 263 employees from IT sector in Kathmandu valley. LMX Dimension measures were adapted from Liden and Maslyn (1998), creative self-efficacy was measured by scale developed by Karwowski, Lebuda and Sniewska (2018) and employee IWB was measured by the help of scale developed by Janssen (2000).

Descriptive statistics along with structural equation modeling were used to analyse the collected data. Descriptive analysis suggested that there is moderate level of LMX leadership prevailing in IT sector. Furthermore, there is significant positive impact of overall LMX quality on employee's innovative work behavior. Amongst four dimensions of LMX, loyalty and professional respect are found to have significant positive influence on innovative work behavior. Other two factors, affect and contribution had no significant impact on innovative work behavior of employees. When the mediating variable, creative self efficacy, was introduced in the model, the direct impact of LMX quality on innovative work behavior remains no more significant while indirect effect trhough creative self-efficacy becomes significant suggesting full mediation.

Based on the findings, organizations should invest LMX training and in the selection of leaders with this leadership style if their aim is to nurture and intensify employee's innovation. They can also use creative self-efficacy test during hiring process and invest in testing personal initiative training in order to amplify the effect of LMX on innovation in organization through creative self-efficacy.

CHAPTER I

INTRODUCTION

1.1 Background of Study

Business world today is rapidly changing and highly uncertain. In the current business environment, no organization is assured of survival without continuous innovation (Park & Jo, 2018). Innovation and creativity in the workplace have become increasingly important determinants of organizational performance, success, and longer-term survival (Anderson, Potočnik & Zhou, 2014). Business organizations that practice only old processes and techniques may no longer be able to survive, particularly in the developing economies, since innovation is continually emphasized. Innovation is an integral part of organizational performance (Atitumpong & Badir, 2018). Employee innovation is an essential factor in the innovation that an organization needs to create for a sustainable competitive advantage (Zhang & Bartol, 2010).

Employees are seen as the driving force behind all the types of innovation (Amabile, Conti, Coon, Lazenby, & Herron, 1996). According to Tierney and Farmer (2017) many factors influence organizational innovation, but it always begins with the creativity of people and small groups. The presence of motivated personnel in a company enables not only incremental gains during the upswing, but also the generation and suggestion of innovative ideas (Sarkar, 2011). As a result, corporations will gain from releasing this creativity through certain styles of contact with their employees. Because creating creative ideas necessitates stepping beyond pre-existing mental frames, it can be difficult for people to muster the cognitive resources and perseverance required for success. Innovative work behavior of employees at work is triggered by various factors and there is plenty of research conducted in this area. Many past researches attempted to identify the determinants of innovation in view of its significance (Kheng, June & Mahmood, 2013). The factors causing employees to engage in IWBs have been explored using different frameworks. Park and Jo (2018) stressed that innovation would not take place without freedom. They further added that to increase innovativeness, employee behaviors should not be tightly controlled

or restricted, but employees should be given autonomy to change how their tasks are done, develop their original solutions to the problems they face, and apply innovative ideas to actual work processes without any obstruction.

Leadership has been reported as one of the most influential factors for employee creativity and innovation at work. Leaders are the most influential promoters of employee creativity at the work place (Sothan, 2016). A proper leadership is of superior importance for the companies that seek to be innovative oriented and make their employees entrepreneurially oriented. According to Denti and Hemlin (2012), leaders play a crucial role in facilitating and supporting innovation among members of their teams. Although employees are involved in the daily operating task, the style of leadership can influence the generation and execution of creative ideas (Ghimire, Haron & Bhatti, 2021). Gu, Hempel and Yu (2019) argue that the leadership characteristics and context can either make or break the environment for creativity and innovation among employees at work. Moral leadership rather than authoritarian leadership can encourage employee creativity at work. Effective leadership acts as a catalyst to foster employees' creative outcomes (Atitumpong & Badir, 2018). Denti and Hemlin (2012) view innovation in organizations as an outcome of individual, team, and organizational efforts joined to produce a new product, process, or service that is potentially attractive to a market. This implies that the exchange relationship between leader and members in the organizations is crucial for innovative work behavior among employees.

This research aims to shed light on the impact that supervisors have on the ability of their workers to become more innovative. The relationship between these parties is referred to as leader member exchange (Yu & Liang, 2004). This interchange takes place within the context of an organization's culture, which can be defined by certain constructs. This study investigates and tests the impact of these constructs on the worker's readiness to introduce new ideas. Leader-member exchange (LMX) theory has been widely studied to identify and examine its positive outcomes in an organization. Employees are one source of an organization's innovation. Leaders' interactions with their followers are thought to contribute to members' positive deviation. Many things depend on the quality of the LMX relationship that a leader creates with his or her member. Such consequences include efficiency, performance,

and dedication. The impact of LMX on innovation is of particular importance. Organizations should invest in LMX training and in the selection of leaders with this leadership style if their aim is to nurture and intensify employee's creativity and innovation.

The IT industry is highly competitive and innovation is the winning strategy for competitive advantage (Goswami & Mathew 2005). The creativity and innovation in an Information Technology industry are essential for sustainable success as well as is vital for the survival of small and medium enterprises (Ghimire et al., 2021). While many other sectors have been studied in different parts of the world for leadership and its impact on employee's innovative work behavior, IT industry still remains untouched. Particularly in Nepal where this field of study is yet to be explored, this study might trigger future research and studies. IT sector in Nepal is budding and The Investment Board of Nepal has identified Information and Communications Technology (ICT) sector as one of the fastest growing sectors in Nepal and has great potential for continued growth in the near future as well. IT industry is known for its rapid change and competitiveness. In order to survive and compete in such business environment IT companies need to find ways to encourage IWB among employees. This study will try to examine the relationship between the quality of LXM and innovative work behavior through creative-self efficacy of employees in IT sector in Kathmandu valley to generate knowledge in the field of leadership and its impact on innovation.

1.2 Statement of the Problem

Current work life is characterized by globalization, technological changes and the aftermath of the economic recession, thereby increasing the need for organizations to be innovative to maintain their competitive position (Hootegem, Witte, Cuyper & Elst, 2018). In a growing number of countries and sectors of industry, it is considered a matter of urgency to develop all competences of the potential workforce and to increase labor productivity by working smarter (Pot, 2011). The major challenge for most of the IT industry is that this industry is becoming more and more competitive nowadays. Similarly, next challenge faced by IT industry is change that occurs in case of technology. In order to survive and grow in such competitive and dynamic IT

industry, companies have to be innovative and one of the best ways to be innovative is to encourage IWB among employees (Amabile et al., 1996).

Many studies have been conducted to explore the influence of LMX quality on employee's innovative work behavior. However, most of those studies explain the western context. Thus, there is a need to replicate the effect of LMX on innovative work behavior in South-Asian setting. This study may advance previous literature by explaining the mediating mechanism of creative self-efficacy on the influence of LMX quality on employee's innovative work behavior in Nepalese context. Nepalese IT sector is an emerging industry with many opportunities. However, there is very limited amount of literature available for leadership and innovation in this sector. This study aims to study the level of LMX and its impact on employee's innovative behavior at work in Nepalese IT sector.

This study will try to fill this literature gap by answering following research questions;

- What level of LMX leadership is prevailing in Nepalese IT industry?
- Does LMX quality have effect on Innovative Work Behavior of IT employees?
- To what extent does the quality of LMX and its dimensions relate to Innovative Work Behavior of IT employees?
- To what degree does the employee's creative self-efficacy mediates the relationship between quality of LMX and Innovative Work Behavior of IT employees?

1.3 Objectives of the Study

The general objective of this study is to analyze the impact of LMX quality on innovative work behavior of employees in the IT sector in Kathmandu.

The specific objectives are:

- To explore the existence of LMX leadership in Nepalese IT sector.
- To examine the impact of LMX dimensions on Innovative Work Behavior of IT employees.

- To analyze the mediating effect of creative self-efficacy in LMX quality and employee Innovative Work Behavior relationship.
- To identify the major dimension of LMX that has the greatest impact on employee Innovative Work Behavior.

1.4 Hypotheses

Numerous research studies have been written on relationship of LMX and employee's IWB, for instance, Basu and Green (1997) found LMX quality to be positively related with employee's IWB mediated by autonomy, leader support and commitment. Similarly, Atitumpong and Badir (2018), in their study of 337 employees from manufacturing sector of Thailand found a positive relationship between LMX and employee IWB. They further argued that this relationship is mediated by creative self-efficacy. Another study by Tarkang, Nange and Ozruten (2020) is conducted in hotel industry of South-west region of Cameroon supported the positive relationship between LMX and employee IWB through employee engagement. On the other hand, in their study conducted in Korean government sector, Park and Jo (2018) found that LMX influences employee IWB through proactivity but there is no direct association between LMX and IWB. Reviewing the available literature, researcher proposes following hypotheses to be tested in Nepalese IT sector's context:

H1: LMX quality influences employee Innovative Work Behavior.

H2: Affect influences employee Innovative Work Behavior.

H3: Loyalty influences employee Innovative Work Behavior.

H4: Contribution influences employee Innovative Work Behavior.

H5: Professional respect influences employee Innovative Work Behavior.

H6: Employee creative self-efficacy mediates the relationship between LMX quality and employee Innovative Work Behavior.

1.5 Scope and Significance

This investigation was conducted to determine the relationship between LMX and employee's innovative work behavior in the IT companies of Kathmandu as perceived by the employees at all the levels. IT sector is rapidly growing industry globally and Nepal is also experiencing unprecedented growth in IT industry recently. This study will examine the impact of LMX quality on the innovative work behavior of employee's in IT industry of Nepal.

The significance of this research lies in the attempt to address the issues highlighted in the problem statement, which will help to fill the existing research gaps. First this study contributes to the extension of the literature to make up for the lack of research on the relationship of LMX quality and employee IWB within the South Asia and more specifically Nepal. By enriching the literature in this field, it would contribute to the body of knowledge in exploring the relationship of these variables, especially in the field of leadership practices and its impact on IWB in IT sector. Second, the findings may supplement the empirical literature regarding the mediating effects of the creative self-efficacy relationship between LMX quality and employee perceptions of their IWB in IT industry. The research is especially important for leaders to understand how their behavior can influence innovativeness, of the subordinates. Lastly, this study is also beneficial for the researcher who wants to conduct study on impact of LMX quality in various organizations. Similarly, future studies can be conducted on the similar area but in different sectors as this study will only conduct research on IT industry of Kathmandu valley.

1.6 Limitations of the Study

Some of the limitations of the research are mentioned below:

- Self-reported measure for employees IWB may lead to over-reporting. Future research should strive to obtain member innovation evaluation from multiple raters.
- The study focuses only on IT sector in Kathmandu. Results cannot be generalized for other sectors. Further study can be conducted on other industries and sectors as well.

- Cross-sectional design only explains relationship between underlying variable at one point of time. Further research should examine how these relationships develop over time using longitudinal design.

1.7 Structure of the Report

This study is illustrated and systematically arranged in five chapters. They are as follows:

First chapter of the study gives brief outline on topic of the study. It describes what the project work is all about and why the project is worth doing. This chapter states the broad problem objectives, help introduce the project subject and explain why the problem is worth solving. It includes other sub-topics such as: objectives of study, research questions, and hypothesis, definition of terms, limitations and scope and significance of the study.

In second chapter this report includes the review of previous writings and studies that are relevant to the problem being explored, and the framework of the theory structure. It presents a summary of major findings of previous researchers being studies in separate headings. It explains why each literature was chosen for the critical review and how it helped to build the theoretical framework and identify problem statement needed for the study.

Third chapter includes the research methodology that was applied in this study along with the discussions of the variables and statistical techniques applied to test the hypotheses. It includes research design, population and sampling, instruments, sources and methods of data collection and data analysis.

Fourth chapter is analysis and result. Basically, this chapter analyzes various data gathered and tried to find out relationship between various factors identified for the research and presents the same with the help of tables. It identifies the interaction between dependent, independent and mediating variables. Then the later part reveals the major findings from the analysis of data which are predetermined as objectives of the study.

Discussions, conclusion and implications, the fifth chapter which summarizes the overall research findings and the appropriate recommendations are forwarded on the basis of the conclusion of the study. It shows the findings in a logical and rational approach to the problem area and also shows practical implications of the study along with the area for further researches.

Besides these, references and appendices are presented at the end of GRP report. Similarly, acknowledgements, table of contents and list of tables and figures are includes in the front part of the report.

CHAPTER II

RELATED LITERATURE AND THEORETICAL FRAMEWORK

This chapter is organized to discuss theories of three primary variables in the title Leader-Member Exchange, creative self-efficacy and innovative work behavior. Each of the theory is clearly explained to cater a comprehensive understanding for this study. Additionally, the previous findings on relationship of these three primary variables are also conferred together for empirical evidence thus led to the deduction of hypotheses. Finally, theoretical framework has been developed towards the end of this chapter.

2.1 Theoretical Review

Innovation

Innovation is widely recognized as the key to an organization's survival and success in today's intensely competitive business environment (Udwadia, 1990). Zawawi et al. (2016) argue that innovation is an important element in today's world as products, services and technologies are moving faster to take place in customers' hearts, thus generating unbreakable benefits and profits to the firms and businesses. The term "Innovation" is always linked to the insertion, implementation or development of an idea, product or service for the purpose of utility in society (Nakato & Wechsler, 2018). Many authors have provided definitions for the word "innovation", and each has its own nuance (Cumming, 1998). Many definitions suggest that the value of innovation lies in its contribution to profit or addition to economic value (Goswami & Mathew, 2005).

Serving as the foundation for new products and services in the global marketplace is one definition of innovation (Kim & Park, 2010). De Jong and Den Hartog (2007) distinguish two types of innovation processes: the genesis of a novel concept and its later implementation. In this context, innovation is sometimes referred to as a driving force in a company's worldwide competitiveness (Kim & Park, 2010). In today's competitive marketplaces, innovation is seen as one of the most important drivers of long-term success for businesses (Singh, 2011). Newness and originality are two

elements of innovation, according to Goswami and Mathew (2005). The newness dimension is concerned with how quickly a new solution is given in compared to that of a rival or substitute in the context of this article. As a result, it has something to do with speed. The novelty dimension is concerned with how a new demand is met, or how an existing need is met differently than before. New ideas are produced, suggested, executed, and implemented to produce these innovations.

Mohr (1969) defines innovation as the successful introduction into an applied situation of means or ends that are new to that situation. The term "new" appears almost invariably and as a matter of course in definitions of innovation, but it has an implication that should not be taken for granted. The author further expressed that innovation is difficult because it involves doing something new. The introduction of innovative practices into a social setting implies actions that entail a certain amount of uncertainty, risk, or hazard.

Udwadia (1990) defines innovation as the successful creation, development and introduction of new products, processes or services. Udwadia further adds that the innovation process requires diverse interactions among creative individuals and supporting technical/professional staff, whose assumptions, beliefs and attitudes may be quite different from each-others. Thus, it is the responsibility of the managerial team to figure out ways of influencing and enabling all of them to put forth their best. Additionally, author reports the most important role of management in the innovation activity is to provide focus to the effort, by constantly challenging prior assumptions and keeping in contact with the market and its dynamically changing demands.

In the similar way, Damanpour, (1991) defines innovation as a new product or service, a new production process technology, a new structure or administrative system, or a new plan or program pertaining to organizational members. The author further reports that the adoption of innovation is generally intended to contribute to the performance or effectiveness of the adopting organization. Moreover, innovation is seen as the means of changing an organization. According to Damanpour (1991), the field of innovation is huge and the multiple innovations must be considered while representing organizational innovativeness to have a clear picture.

Organization for Economic Cooperation and Development (OECD) defines

innovation as implementation of a new or significantly improved product (good or service), or process, a new marketing method, or a new organizational method in business practices, workplace organization or external relations (OECD, 2005). According to OECD, a common feature of innovation is that it must be implemented. The firm which has implemented an innovation during the period under review is called innovative firm. OECD has classified innovation into four categories namely; product innovation, process innovation, marketing innovation and organization innovation.

Product innovation: A product innovation is the introduction of a good or service that is new or significantly improved with respect to its characteristics or intended uses. This includes significant improvements in technical specifications, components and materials, incorporated software, user friendliness or other functional characteristics (OECD, 2005).

Process innovation: A process innovation is the implementation of a new or significantly improved production or delivery method. This includes significant changes in techniques, equipment and/or software (OECD, 2005).

Marketing innovation: A marketing innovation is the implementation of a new marketing method involving significant changes in product design or packaging, product placement, product promotion or pricing (OECD, 2005).

Organizational innovation: An organizational innovation is the implementation of a new organizational method in the firm's business practices, workplace organization or external relations (OECD, 2005).

Innovative Work Behavior

The epistemology of innovative work behaviours was derived from the term innovation. Usually, the word innovation is often being confused with the word invention (Zawawi et al., 2016). Van de Ven (1986) states that an invention or a creative idea does not become an innovation until implemented. Author further suggests that by most standards, the success of an innovation is largely defined in

terms of the degree to which it gains good currency, i.e., becomes an implemented reality and incorporated into the taken-for-granted assumptions and thought structure of organizational practice (Van de Ven, 1986).

For managers, innovation is vital, but paradoxical, requiring flexibility and empowerment, as well as control and efficiency (Khazanchi, Lewis & Boyer, 2007). The capacity of formal organizations to engage in successful innovation has become a topic of increasing interest among organizational scholars and administrator (Rowe & Boise, 1974). Janssen (2000) defined IWB as the 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. Workplace innovation can be understood as a broader process that not only includes idea generation (creativity), but also the implementation of ideas within the work setting (Hammond, Neff, Farr, Schwall & Zhao, 2011). Atitumpong and Badir (2018) stated that, nowadays, IWB of employees is essential for the success of an organization because an organization cannot be innovative without their employees.

According to Carmeli et al. (2006), in the age of globalization, individual innovation within the workplace is the foundation of high-performance. Given the importance of innovation, there is a growing interest among scholars trying to answer the question why and under which circumstances employees express innovative behavior within their organization (Sanders et al., 2010). A variety of factors have been studied as important antecedents to individuals' innovation, such as organization culture and climate (Scott & Bruce, 1994), relationship with their supervisors (Janssen & Van Yperen, 2004), job characteristics (Oldham & Cummings, 1996), social/group context (Munton & West, 1995), and individual differences (Bunce & West, 1995).

Understanding innovative work behavior is important for the field of individual innovation (De Jong & Den Hartog, 2008). Innovative work behavior has been the issue of discussion for so many years now. However, inconsistent findings make it a topic which needs further advancement in terms of literature. Creativity and innovation are two close terms, sometimes used interchangeably. Nevertheless, scholars have agreed upon a concept that creativity is the initial process of innovation and the generated idea has to be implemented it to be an innovation.

Leadership

For a number of decades now, leadership has been central to studies in the management area in general and the organizational behavior area in particular (Day, 2012). One of the explanations for that must be the importance of roles played by leaders across the organizations. Moghini (2016) states that despite years of research in the field of leadership, researchers can hardly agree on the definition of leadership. The complexity of leadership is such that even after reviewing so much material in this topic, academics are still unsure what leadership is and what its constructs are. This complexity is exacerbated by the various views used by different scholars when studying leadership, as well as their focus on only one component of leadership. Although there are hundreds and thousands of definitions given by different scholars, there are certain common factors in definitions of leadership such as "process", "influence", "followers", and "goals" (Northouse, 2007, as cited in Moghimi 2016). Yukl, (2010) attempted to provide a comprehensive definition of leadership, and defined it as "the process of influencing others to understand and agree about what needs to be done and how to do it, and the process of facilitating individual and collective efforts to accomplish shared objectives". Despite the fact that this is an acceptable standard definition of leadership, it should be noted that numerous frameworks have been used to study the construct in the past, some of which may or may not be in total accord with this definition.

Numerous explanations, classifications, theories and definitions about leadership, exist in the contemporary literature (Khan, Nawaz & Khan, 2016). Most of theories have emphasized leadership from the point of view of leader, such as skills approach, trait approach or style approach. Others theories such as path-goal theory, situational leadership or contingency theory focused more on the follower and the context. Several leadership approaches disagree with the idea of universally successful behaviors and styles in leader-follower settings (Tyssen, Wald & Spieth, 2013). Amongst all the approaches of leadership, one important approach is interaction-oriented approach. Tyssen et al. (2013) dyadic approaches focus on the reciprocal influencing process between leader and follower. The implicit time frame needed for interaction is of crucial importance for the applicability of these approaches.

According to Liden, Sparrowe and Wayne (1997), in leadership literature, there are several contemporary leadership theories ranging from transformational to authentic or servant leadership theories, but there is only one that is considered to be foremost dyadic in nature, and is named as Leader-Member Exchange Theory. This study is concerned with examining the impact of LMX quality on the innovative work behavior of the employees in IT sector. The next section presents the theoretical review of the existing literature in the field of LMX.

Leader-Member Exchange

The LMX theory builds on social exchange theory (Blau, 1964) and assumes that a supervisor has a unique relationship with each employee (Graen & Uhl-Bien, 1995), which is negotiated over time as a result of role expectations and fulfilments between leaders and members. Graen and Uhl-Bien (1995) described the three domains of leadership in detail. Leader-based approach focuses on leader behavior and characteristics, such as leader traits, leader behaviors, personality behaviors, leader attitudes, leader perceptions, leader power and influence and so on. On the other hand, follower-based approach is concerned about follower's traits, behaviors, perceptions, expectations and their impact on leadership styles and techniques. Finally, relationship-based approach would focus on the dyadic relationship between leader and the follower. Primary focus of relationship-based approach is the optimum mix of relational characteristics to obtain the desired outcome. This approach is based on trust, respect and mutual obligation. The three domains are mentioned in Table 2.1.

Table 2.1

Three Domain Approaches to Leadership

	Leader-based	Relationship-based	Follower-based
What is leadership?	Appropriate behavior of the person in leader role	Trust, respect, and mutual obligation that generates influence between parties	Ability and motivation to manage one's own performance

What behaviors constitute leadership"	Establishing and communicating vision; inspiring, instilling pride	Building strong relationships with followers; mutual learning and accommodation	Empowering, coaching, facilitating, giving up control
Advantages	Leader as rallying point for organization: commom understanding of mission and the values: can initiate wholesale change	Accommodates differing needs of subordinates; can elicit superior work from different types of people	Makes the most of follower capabilities; frees up leaders for other responsibilities
When appropriate?	Fundamental change; charismatic leader in place; limited diversity among followers	Continuous improvement teamwork; substantial diversity and stability among followers; Network building	Highly capable and task committed follower
Where most effective?	Structured tasks; strong leader position power; member acceptance of leader	Situation favourability for leader between two extremes	Unstructured tasks; weak position power; member non-acceptance of leader

LMX theory was first introduced by George Graen and his fellow scholars in 1975/76. Liden et al. (1997) further suggested that the LMX theory of leadership states that leaders often differentiate among subordinates and develop different exchange relationships with these subordinates. There exist differences between the leader and each of the followers who over time become a part of in-group (high quality exchange relationship) or out-group (low quality exchange relationships) (Dansereau, Graen & Haga, 1975).

According to Burns and Otte (1999) the manager does not have time to give all members equal attention and establishes a close relationship with only a few key members who become the "in-group." They further suggest that in initial interactions, judgments are made and opinions are formed by the leader and the member. If the opinion is positive, the leader will assign better tasks to the member and the member will experience more support. Subordinates who make a part of the in-group, unlike the members of the out-group, get more support, confidence, information and concern from their leaders (Dansereau et al., 1975). On the other hand, low quality exchange relationships persist with the members who are not part of the subset, limited to the leader's job description (Erdogan & Liden, 2002). As such, members of out-group get unchallenging task with restricted formal relationship with leader and get less respect and trust from their respective leaders and have less influence on others.

LMX investigates the quality of the exchange relationship between a leader and an individual member in a work unit (Tyssen et al., 2013). This quality of exchange relationship between leaders and their subordinates is known as leader-member exchange. Conceptualizations of LMX development suggest that leader rather than the member has more control over the quality of exchange that develops between the leader and member (Liden et al., 1997). Rather than focusing on member and leader characteristics separately, researchers have investigated interactional variables as determinants of LMX (Liden et al., 1997). Liden and Maslyn (1998) have advocated multidimensionality of LMX theory with four factors; affect loyalty, contribution and professional respect.

Dimensions of LMX

Healthy controversy currently surrounds the question of the measurement and the dimensionality of the LMX construct (Graen & Uhl-Bien, 1995). One especially critical theoretical question that has not been explicitly addressed is whether leader-member exchange is either a one-dimensional relationship or a multidimensional relationship (Dienesch & Liden, 1986). Taking role theory as the basis for their claim, Dienesch and Liden proposed LMX as multidimensional theory. According to them, as the roles are pervasively accepted as multidimensional aspect, so does the LMX as it is directly evolved from role theory. Graen and Uhl-Bien (1995) concluded that

LMX is constructed by multiple dimensions, but these dimensions can be tapped into one single measure of LMX. Three work-related dimensions namely respect, trust and obligation were proposed by Graen and Uhl-Bien (1995) as the ingredients of strong leader-member relationships. However, Dienesh and Liden (1986) specified LMX dimensions as multidimensional which includes four dimensions: perceived contribution, loyalty, affect and professional respect.

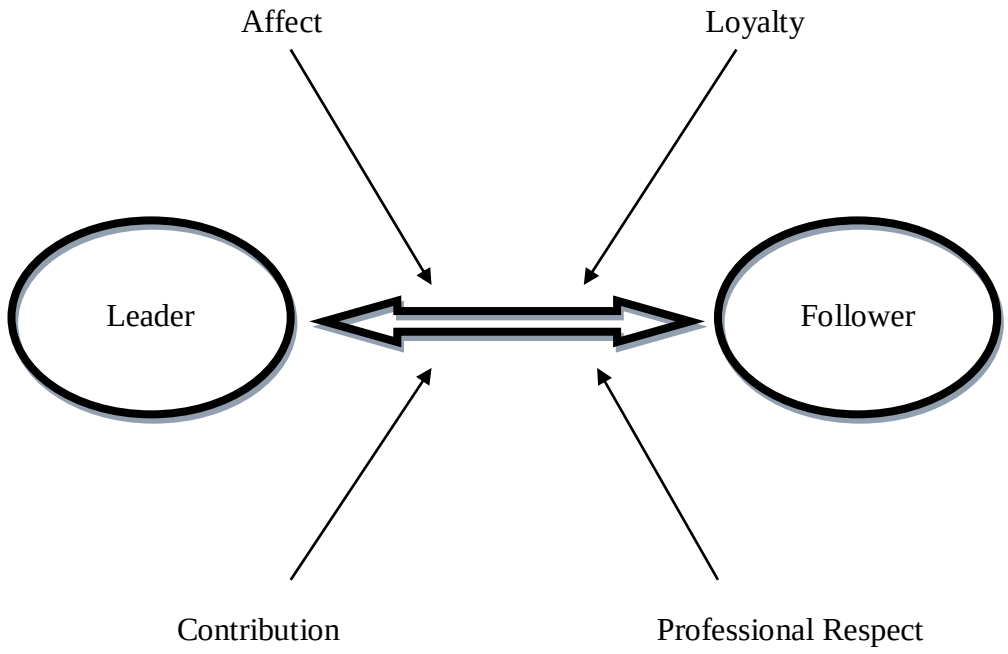

Figure 2.1 Dimensions of LMX

Table 2.2

Definition of LMX Dimensions (Liden & Maslyn, 1998)

Affect	The mutual affection members of the dyad have for each other based primarily on interpersonal attraction, rather than work or professional values. Such affection may be manifested in the desire for and /or occurrence of a relationship which has personally rewarding components and outcomes (e.g. friendship).
Loyalty	The expression of public support for the goals and the personal character of the other member of the LMX dyad. Loyalty involves faithfulness to the individual that is generally consistent

	from situation to situation.
Contribution	Perception of the current level of work-oriented activity each member puts forth toward the mutual goals (explicit or implicit) of the dyad. Important in the evaluation of work-oriented activity is the extent to which the subordinate member of the dyad handles responsibility and completes tasks that extend beyond the job description and/or employment contract; and likewise, the extent to which the supervisor provides resources and opportunities for such activity.
Professional Respect	Perception of the degree to which each member of the dyad has built a reputation within and/or outside the organization, of excelling at his or her line of work. This perception may be based on historical data concerning the person, such as: personal experience with the individual; comments made about the person form individuals within or outside the organization; and awards or other professional recognition achieved by the person. Thus it is possible, though not required, to have developed a perception of professional respect before working with or even meeting the person.

However, Liden and Maslyn (1998) do not reject the possibility that other LMX dimensions might also exist as suggests social exchange theory. Also other dimensions such as liking, intimacy, support, openness and honesty (Graen & Scandura, 1987) might also be used to characterize LMX. An important characteristic of multi-dimensionality is shown empirically is each dimension differentially predicts various outcomes consistent with theory and research (Liden & Maslyn, 1998). Literature has shown that different LMX dimension has different level of impact on individual and organizational outcomes. In this study researchers are studying the impact and magnitude of the four dimensions on the employee innovative behavior.

Antecedents of LMX

Initial literatures on LMX basically revolved around the outcomes of leader-follower

relationship. However, in the recent times the authors have been studying the possible antecedents of LMX which ultimately lead to those outcomes. Although leaders play central role in determining the quality of LMX relationships, followers influence the process as well (Dienesch & Liden, 1986). Thus, the quality of LMX not only depends upon the leader characteristics and behaviour but also on follower attitude and behaviours. According to Liden et al., (1997) the determinants of LMX quality are member's performance, personality and upward influence whereas on the part of leader, the factors are leader characteristics, interactional and contextual factors.

Dockery and Steiner (1990) reported that the leader's perceive, liking for members and ability of members as the most consistent variable related to quality of leader-member exchange. From the member's perspective, all variables such as liking, assertiveness, rationality and ingratiation are important for LMX quality. Only self-assessed ability fails to be a determinant of quality of leader-member exchange (Dockery & Steiner, 1990). Lapierre and Hackett (2007) found citizenship behaviors as one of the predictors of LMX. Li, Liang and Crant (2010) reported that member proactive personality leads to higher LMX quality. A field study of 84 registered nurses and their supervisors by Phillips and Bedeian (1994) revealed that leaders' perceptions of leader-follower attitudinal similarity and follower extraversion were positively related to the quality of LMX. Whereas, Dulebohn et al. (2012) suggest conscientiousness and agreeableness had higher positive correlations with LMX quality than extraversion.

Furthermore, it was found that member ingratiatory actions influenced leader´s evaluations of member performance through increased positive affect for the subordinate (Wayne & Ferris, 1990). Leader delegation (Yukl, O´Donnell & Taber, 2009), empathy towards subordinate (Mahsud, Yukl & Prussia, 2010), ethical behaviors (Walumbwa et al., 2011), leader's efforts towards relationship development (Maslyn & Uhl-Bien, 2001) are helpful for creating better employee perception and ultimately better quality of LMX. According to Dienesh and Liden (1986) contextual factors such as such as work group composition, a leader´s power and organizational policies and culture are important influencers of LMX quality. Green, Anderson and Shivers (1996) also suggested that organizational characteristics and leadership contexts determine the quality of LMX. They found a positive relationship between

financial resources and quality of LMX but a negative relationship between workload and group size. Finally, Aryee and Chen (2006) found a positive correlation between work unit climate and supervisory control of rewards with LMX quality.

Consequences of LMX

Research on LMX has shown significant associations with many important work outcomes (Liden & Maslyn, 1998). Results from a study conducted by Gerstner and Day (1997) suggest significant relationships between LMX and job performance, satisfaction with supervision, overall satisfaction, commitment, role conflict, role clarity, member competence, and turnover intentions. Graen and Liden (1982) suggested that LMX is an effective predictor of employee turnover. Similarly, Kim, Liu and Diefendorff (2014) studied 212 employee–supervisor pairs from eight Chinese companies and found that LMX quality had an indirect and positive relationship with taking charge via psychological empowerment and had an indirect and positive relationship with job performance via taking charge. They further suggested that employees who develop high-quality exchange relationships with their supervisors are more likely to engage in voluntary, constructive efforts to change work-related practices and processes, consequently performing better in their jobs.

Sothan (2016) observed a significant positive relationship between LMX with knowledge sharing behavior and creativity of employees. In a study of Korean and US automotive industry, Park and Nawakitphaitoon (2017) found a consistently significant positive relationship between LMX quality and employee voice. Raghuram, Gajendran, Liu and Somaya (2016) came up with an interesting finding related to benefit of LMX for an employee who quits. The authors claim that the higher the LMX, the more likely people will earn higher salary and more responsibility in their next employment. Volmer, Niessen, Spurk, Linz and Abele (2011) found significant positive relationship between LMX and employee's job satisfaction. Green (2008) found a positive influence of high quality LMX on employee decision making and participation. Also, Sin, Nahrgang and Morgeson (2009) reported a positive influence of high-quality exchange relationships in subordinates' participation in communication with leaders. Finally, Basu and Green (1997), Atitumpong and Badir (2017), Park and Joe (2018) and Tarkang et al. (2020)

in their respective studies reported a significant influence of LMX on employee IWB.

Creative Self-Efficacy

The creative self-efficacy concept evolved from broader lines of inquiry into self-efficacy and creativity (Chong & Ma, 2010). Creative self-efficacy is derived from Bandura's (1997) more general concept of self-efficacy. Both creativity and self-efficacy have been associated with particular individual traits and environmental conditions in the workplace (Chong & Ma, 2010). Self-efficacy develops from the acquisition of complex cognitive and social traits and is seen as a contributing factor in motivational theory (Chong & Ma, 2010). People with high perceived self-efficacy are more efficient in their actions, which results from their confidence in their ability to control situations and to handle problems (Cervone & Peake, 1986). Similarly, individual creativity can be considered the result of personal trials and dispositions (Teng, Hu & Chang, 2019). Martins and Terblanche (2003) defined creativity is the generation of new and useful ideas. Creative effort is usually a demanding activity requiring time and effort (Du, Li & Zhang, 2018). Individual creativity traits such as willingness to take risks, having broad interests, attraction to complexity, intuition, tolerance for ambiguity, and self-confidence are antecedents of creativity. Having competence in the job topic, identifying knowledge gaps, freedom and autonomy, diversity of opinions, encouragement, appropriate resources, intrinsic drive, hard work, and the capacity to accomplish what you love are also antecedents (Amabile et al., 1996). Innovation, change, need fulfillment, fresh perspectives, paradigm changes, and advancement are all outcomes of creativity (Tierney & Farmer, 2002).

The concept of creative self-efficacy as a predictor of creative performance was first introduced in the management literature in the early twenty-first century (Tierney & Farmer, 2002), and was defined as "the idea that one has the power to produce innovative outcomes" (Tierney & Farmer, 2002). More recent efforts have been made to improve the operationalization of creative self-efficacy and its educational consequences (Karwowski, 2014). Furthermore, recent theoretical advancements have focused on organizing results from empirical investigations under the banner of creative self-beliefs (Karwowski & Barbot, 2016), one of which is creative self-efficacy.

Creative self-efficacy reflects one's confidence in the ability to perform a specific task in the innovation process; optimism refers to the general expectancy of favorable outcomes (Luthans, Avolio, Avey, & Norman, 2007). Tierney and Farmer (2002) define creative self-efficacy as the belief that one has the ability to produce creative outcomes. Creative self-efficacy enhances the individual's will to persevere and cope with challenges and it can motivate individuals to overcome obstacles (Tierney & Farmer, 2002). Bandura and Locke (2003) suggest CSE can help employees look for creative solutions to successfully carry out their tasks. They further express that employees that have a high level of creative self-efficacy can be more confident in their abilities, higher motivation to complete specified activities and the ability to utilize cognitive resources. The concept of creative self-efficacy has its roots in social cognitive theory which states that people will not devote enough time and resources in their work unless they believe they can generate the desired consequences and prevent negative ones through their actions (Bandura, 2001).

According to social cognitive theory, three important dimensions shape employee's creative self-efficacy (Bandura, 1997). The first dimension is the difficulty level of a task for employees. This component represents an employee's attempts to identify and develop new ideas, as well as measure how much information they have about a task, in the context of innovation. The second dimension examines an employee's belief in their abilities by looking at how well they can handle the task's difficulty. Employee strength refers to their attempts to promote their ideas and get attention from others in this context. Finally, CSE promotes creativity by allowing employees to put novel ideas into practice for the benefit of the company (Kroes, 2015). Employees with CSE show a positive attitude toward creative output and exhibit IWB.

Self-efficacy in the arts has been demonstrated to predict one's creative self-identity and performance (Karwowski, 2014). Creative self-efficacy appears to be linked to ratings of one's own creativity; however, this relationship may be contingent on one's interpretation of what it means to be creative (Karwowski, 2011). Creative self-efficacy appears to be positively connected to having a growth attitude about creative abilities, whereas fixed creative mindsets appear to be negatively related (Karwowski, 2014). As a result, believing that creativity is a trait that can be developed appears to be linked to beliefs about one's ability to produce creative outputs and handle creative

challenges. Karwowski (2011) suggested that creative self-efficacy may be influenced by one's implicit theories of creativity as well as one's understanding of creativity.

Creative self-efficacy has shown to mediate the relationship between a number of constructs related to creative mindset, creative performance, leadership and innovation. For example, it is considered that creative self-efficacy mediates the relationship between creative potential and creative performance (Karwowski, 2016). Gong, Huang and Farh (2009) discovered that creative self-efficacy mediated the association between mastery goal orientation and creativity in their study. CSE was demonstrated to be a partial mediator between optimism and inventive behavior by Li and Wu (2011). Gong et al. (2009) found that CSE fully mediated the effects of learning orientation on creativity from a motivational standpoint. CSE may thus be a significant mediating mechanism explaining the impact of multiple creative antecedents on creativity-related outcomes, according to research. Since creative self-efficacy is the connection between creative personalities and innovative behavior, creative self-efficacy should be included in the design of an overall model for employee innovation behavior.

2.2 Empirical Review

Relationship between LMX and Employee's Innovative Work Behavior

There are certain key results on LMX and innovativeness that are critical for today's businesses. Studies on creativity as a result of LMX, for example, are crucial since a company's innovative potential is based on its employees' creativity (Chen, Chang & Chang 2015). The degree to which a company's personnel use unique problem-solving strategies is measured by creativity (Gerstner & Day, 1997). According to Unsworth and Parker (2003), creativity encompasses the generation of an idea, whereas innovativeness encompasses not just the generation but also the application of that idea. As a result, because creativity is an inherent and central component of innovativeness, it is advantageous to consider the findings on creativity alongside those on innovativeness.

Several research have looked at the link between LMX and innovation, however the results have been equivocal. Some studies have discovered that LMX has a direct

impact on inventiveness. While other research, on the other hand, have concluded that LMX has no direct impact on innovation. Existing research on the association between LMX and innovation yielded mixed results Khalili (2018). Mascareño, Rietzschel and Wisse (2020) believe that the nature of the innovation process, as well as how it is frequently operationalized, is to blame for the disparities. In the subsequent, findings from various empirical studies are discussed.

Lee (2008) investigated the LMX and innovative behavior among 201 R&D professionals in Singapore and found significant relationship between one of the dimensions of LMX i.e. loyalty and innovativeness of the employees. A high-trust exchange is built on loyalty, with leaders more willing to provide assistance to followers, resulting in higher innovation. Tierney and Farmer (2002) discovered evidence for superior support and followers' creativity self-efficacy in their investigation. These findings are similar to those of Zhao, Kessel and Kratzer (2013) where LMX and employee creativity are observed to have a positive relationship which is mediated by perceived insider status.

Liao, Liu, and Loi (2010) in a longitudinal study discovered that the quality of LMX interactions influenced employee creativity via higher self-efficacy beliefs. They proposed, based on social cognitive theory (Bandura, 1986), that employees in high-quality LMX relationships might get substantial encouragement and expectation from leaders as a type of social persuasion, and therefore create a “can-do” attitude. These employees are more likely to set difficult goals, generate new ideas, begin creative solutions, and enjoy the experience of "being creative" if they establish positive self-beliefs. Also, Hammond et al. (2011) in their study related to predictors of innovation at work found LMX as one of the significant predictors of employee innovative behavior. These findings are consistent with the findings of Tierney and Farmer (2004).

Muñoz-Doyague and Nieto (2012) carried out a study among employees from the automotive sector to analyze how the exchange employees maintain with immediate supervisor influence the creativity that they manifest. Authors suggested that shortening the gap between a leader and a subordinate causes the leader to be more aware of a certain employee's needs, expectations, and challenges in his or her employment, which could undoubtedly contribute to the employee's more innovative

and productive work performance. Sanders et al. (2010) also observed a significant positive relationship between LMX and employee innovative work behavior. The findings further suggested there is mediating effect of satisfaction with HR practices on relationship between LMX and employee IWB.

Agarwal, Datta, Blake-Beard and Bhargava (2012) in their survey of 979 Indian managerial employees working in six service sector organisations used structural equation modelling to analyse the linkage between LMX and employee IWB. The findings imply that the quality of interactions between employees and their immediate supervisors has an impact on engagement. Work engagement has a positive relationship with innovative work behavior. Hence, work engagement mediates the relationship between LMX and employee IWB. They concluded leaders who support their subordinates (both professionally and emotionally) provide them with direction and knowledge, unlock hidden potential, and encourage them to devote their efforts and abilities to completing job duties. Tarkang et al. (2020) in their survey of 272 hotel employees found a similar pattern where leader's positive interactive behavior have an expressive influence on their follower's engagement levels, which ultimately encourages employees to show innovative work behavior. In another similar study Xerry (2012) reported that there is indirect relationship between LMX and Innovative behavior mediated by perceived organizational support.

In a study of 318 knowledge workers of Multimedia Super Corridor status in Malasia conducted by Kheng et al. (2013) LMX and social capital were found to be strongly and positively associated to IWB. In comparison to LMX, the results show that social capital has a higher influence on employee IWB. According to the authors when employees believed their efforts were fairly rewarded by their leader, the importance of LMX on their IWB led in them responding more innovatively to increased levels of job demands. Furthermore, the high LMX relationship's intrinsic trust creates an environment in which subordinates are more comfortable introducing and pushing creative ideas. Wang, Fang, Qureshi and Janssen (2015) also reported a positive and significant relationship between LMX and innovative behavior given that the numbers of within-group ties are low.

A survey of 193 leader-member dyads from two high-tech companies in mainland China by Qu, Janssen and Shi (2015) discovered a positive and significant

relationship between LMX and follower creativity when either leaders or followers, or both leaders and followers, set high rather than low expectations for creativity, with the highest level of creativity observed when followers and leaders in a high-quality LMX hold high expectations for creativity. When both, the leader and the follower expectations for creativity are low, the relationship between LMX and follower creativity is muddled. Another study by Akram, Lei and Haider (2016) conducted in IT industry of China found positive and significant relationship between relational leadership and idea generation, idea promotion and idea realization. Hence, the authors concluded with enough evidence that relational leadership has strong positive correlation with employee innovative behavior.

Rauniyar, Ding and Rauniyar (2017) investigated the effect of abusive supervision on employee creativity among 325 full-time employees from 17 companies covering six industries in the central and eastern development regions of Nepal and found that abusive supervision is negatively related to employee creativity and this relationship is fully mediated by creative self-efficacy. Similarly, Poudel (2020) studied the entrepreneurs in SME's from Pokhara, Nepal and observed that transformational and transactional leadership style along with entrepreneurial orientation exert significant positive influence over business performance. The study further indicated that transformational leadership is stronger predictor of entrepreneurial orientation and business performance than transactional leadership style. Shrestha (2012) studied relationship between leadership styles and employee and organizational outcomes in a Nepali telecommunication company. The findings suggested a significant impact of transformational leadership on individual and organizational outcomes.

Khalili (2018) conducted a research on 1221 employees working across various organizations in Australia. The findings of this study revealed there is significant positive relationship between quality of LMX and employee creativity and innovation. The results further indicated employee's personal initiative moderated the relationship between LMX and employee creativity and innovative behavior. Another study by Xerri and Reid (2017) in 220 nurses in Australian hospitals exhibited that employee's wellbeing with relationship with others at work completely mediates the relationship with training opportunities and their innovative behavior. Nguyen (2020) conducted a quantitative survey with 438 employees and managers from 300

processing enterprises in Vietnam and the quality of the relationship between leaders and members was discovered to play a vital impact in enhancing creative participation in work performance and employee job happiness, both of which contribute to operational efficiency.

Saeed, Afsar, Cheema and Javed (2018) analyzed the data collected from 323 employees of automotive sector to investigate the impact of LMX on IWB of employees. The interplay of leader–member exchange, domain knowledge, and CSE has a complex effect on employee's innovative work behavior, according to this study. They discovered that when domain knowledge and CSE were both high, the largest beneficial association between leader–member interchange and innovative work behavior existed. Another crucial finding of the study was that creative process engagement mediated the three-way interaction's effect on innovative work behavior.

A recent study by Mascareño et al. (2020) reported though LMX and innovative behavior did not have a direct relationship, employee creativity fully mediates the relationship between LMX and innovation. They reported professional respect dimension of LMX to predict the innovative behavior among employees through creative self-efficacy. This finding was consistent with the findings of Carnevale, Huang, Crede, Harms and Uhl-Bien (2017) and that of Bruccoleri and Riccobono (2018). However, Taştan and Davoudi (2015) didn't find any significant relationship between LMX and employee innovative behavior. But, the results revealed that trust in leader had positive influence on IWB and significantly moderated the relationship between perceived LMX quality and IWB of employees (Taştan & Davoudi, 2015).

In contrast to the studies that suggest a favorable association between LMX and employee creativity and innovation, a few writers have claimed that there is no such relationship or that LMX may have a negative impact on employee creativity and innovation. For example, Zhang and Zhou (2019) stated that LMX generates a negative influence on employee creativity through reduced vertical task conflict when the levels of LMXs are high, according to a curvilinear indirect effect on employee creativity. They discovered that the indirect negative effect of LMX on creativity was moderated by the indirect negative effect, resulting in a decreased total effect. Liden, Erdogan, Wayne and Sparrowe (2006) suggested that the members with low LMX

should attain more positive work outcomes under conditions of high rather than low levels of LMX differentiation because when LMX differentiation is high, followers with low LMX see that it is possible to form high-quality social exchanges with the leader because some group members have succeeded in doing so. This sign of hope motivates followers to adopt more positive attitudes and to pursue behaviors that make a good impression on the leader.

Kauppila (2015) reported a similar pattern where rather than supporting the conventional view that low LMX members are harmed by LMX differentiation because of their lower status in relation to other group members, this study supports the alternative view that low LMX members prefer to work in groups where they can at least form higher-quality LMX. In contrast to Liden et al. (2006), who claimed that people with high LMX are unaffected by LMX differentiation, this study implies that differential treatment increases in-group members' workload and rivalry among group members, eroding high LMX members' job attitudes. These inconsistent conclusions about LMX, creativity, innovation and other outcomes hints at a need for further research in this filed.

Creative Self-Efficacy as a Mediator

To develop the interactional perspective of IWB, researchers must discover mediating mechanisms (De Jong & Hartog, 2010). The mediation effect of motivational cognitive states including flexible role orientation, supervisor support, and job breadth self-efficacy on the relationship between leadership styles and creativity has been confirmed in previous research (Parker, Williams & Turner, 2006). To further understand the discrepant findings of previous studies, it is important look at the process through which LMX affect employees' IWB. Psychological empowerment was found to fully mediate the LMX-IWB association (Schermuly, Meyer & Dämmer, 2013). Whilst job autonomy was found to mediate the influence of LMX on creative work participation (Volmer, Spurk & Niessen, 2012), suggesting that there may be other mediators of this relationship.

This study may add to the body of knowledge by elucidating the function of creative

self-efficacy in mediating the impact of employee learning orientation and LMX on IWB. According to Tierney and Farmer (2004) supervisors, who anticipate their colleagues to be creative, provide more creative-relevant support, which is internalized by employees and, as a result, improves employees' creative self-efficacy. Gilson and Shalley (2004) discovered that when an employee's willingness to try new things is bolstered by supervisors' trust and reliability, he or she engages in a more thorough analysis of an issue and seeks out fresh solutions.

Many CSE related studies have focused on identifying elements that might explain its genesis, given its ability to promote creativity and associated phenomena (Terney & Farmer, 2017). Review of existing literature suggests that CSE has been regarded in a variety of ways throughout investigations and as playing a range of potential roles in the dynamics of creativity-related events. CSE has been studied as a predictor, moderator and a mediator by several authors in the past (Terney & Farmer, 2017).

Liu, Jiang, Shalley, Keem and Zhou (2016) in their meta-analysis of motivational mechanism for creativity observed a mediating role of creative self-efficacy between the relationship of contextual and personal factors with creativity. In another study conducted among 970 students of public and private universities in Taiwan, Li and Wu (2011) found that creative self-efficacy significantly and partially mediates the relationship between optimism and innovative behavior. Terney and Farmer (2004) also reported that the impacts of supervisor expectations, supervisor behaviors, and employee perspective on creative performance were mediated by creative self-efficacy. In another study Wang, Liu and Shalley (2018) concluded that that the two different types of idiosyncratic deals have differential effects on employees' creativity through the mediation mechanism of CSE.

In the literature of leadership and innovative behavior, creative self-efficacy has been developed as an important construct. According to Atitumpong and Badir (2018) LMX and IWB are positively related and this relationship is mediated by employee’s creative self-efficacy. Choi (2004) also reported that creative self-efficacy mediated the effect of individual creative personality on creative performance. Likewise, Javed, Fatima, Khan and Bashir (2020) reported a mediating impact of creative self-efficacy in inclusive leadership and innovative behavior relationship. Furthermore, Javed,

Iqbal and Imran (2020) stated that there is CSE mediates the relationship between sustainable leadership and employee innovation. Based on these findings, this study will further explore the mediating role of CSE on LMX and IWB relationship in Nepalese IT sector.

Table 2.3

Summary of Key Literature Review

Author/ Year	Methodology/Approach	Variables	Major Findings
Terney and Farmer (2002)	Cross-sectional study with samples from two different companies including blue collar and white collar employees. Self-administered questionnaire survey with 584 and 158 respondents from each company respectively. SEM is used for data analysis.	Job tenure, Job self-efficacy, Supervisor behavior, Job complexity, Creative efficacy and Creative performance	Job tenure, job self-efficacy, supervisor behavior, and job complexity contribute to creative efficacy belief. Creative self-efficacy also predicted creative performance beyond the predictive effect of job self-efficacy.
Lee (2008)	A cross-sectional design using the responses from 201 R&D professionals in Singapore. Hierarchical regression analysis was used for data analysis.	Leadership, Leader-follower relationship and Innovativeness	Transformational leadership has positive association with the dimensions of LMX as well as innovativeness.
Sanders et al. (2010)	Cross-sectional survey from Dutch and German technical organizations with 272 responses.	Innovative behavior, Satisfaction with HR practices and	LMX and satisfaction with HR practices were positively related

	Correlation with multi-step regression analysis was used for data analysis.	LMX	to innovative behavior. Furthermore, satisfaction with HR practices mediates the relationship between LMX and innovative behavior.
Liao, Liu & Loi (2010)	Longitudinal data were collected from 828 employees on 116 teams. The sample for the study was composed of technicians working in Chinese iron and steel manufacturing company. Hierarchical linear modeling was applied for data analysis.	TMX quality, LMX quality, Teams LMX differentiation, Team member's self-efficacy, Team member's creativity.	Quality of LMX interactions influenced employee creativity via higher self-efficacy beliefs. Employees in high-quality LMX relationships might get substantial encouragement from leaders as a type of social persuasion, and therefore create a "can-do" attitude.
Agarwal, Datta, Blake-Beard & Bhargava (2012)	Cross-sectional design for which respondents were 979 Indian managerial employees working in six service sector organizations in	LMX, Work engagement, Innovative Behavior and Intention to quit.	Quality of exchanges between employees and their immediate supervisors influences

	India. SEM was used to test the hypotheses.		engagement. Work engagement mediates the relationship between LMX and innovative work behavior.
Xerry (2012)	This study used a mixed-methods approach, including a survey in which 104 nurses responded with useable results and semi-structured interviews with 12 nursing unit managers (nursing supervisors) in Australia. SEM was used for data analysis.	LMX, Perceived organizational support and Innovative behavior	Perceived organizational support mediates the relationship between leader–member exchange and the innovative behavior of nursing employees.
Shrestha (2012)	A quantitative study with the sample consisted of 115 employees working in a Nepali telecommunication company. Structural Equation Modeling was employed to test the hypothesized relationships.	Leadership styles, Satisfaction with leader, Work unit effectiveness and leader effectiveness	There is a significant impact of transformational leadership on individual and organizational outcomes.
Volmer, Spurk & Niessen (2012)	Longitudinal field survey was conducted to collect data from 144 employees at a large, internationally operating high-technology firm in	LMX, Job autonomy, Creative work involvement	The positive relationship between LMX and creative work involvement was stronger when

	Germany. Hierarchical regression analyses were used to test the hypotheses.		employees experienced greater job autonomy.
Muñoz-Doyague & Nieto (2012)	Cross-sectional design with 53 valid responses collected from automotive sector. Multiple- dregression was used to analyze the data.	LMX, Team-member exchange and Employee creativity	High-quality exchanges between the employee and their work group and, to a lesser extent, their immediate superior, have a significant positive influence on their creative behavior.
Kheng, June & Mahmood (2013)	Quantitative study with usable responses from 318 participants. Data was collected using questionnaire through a mail survey from workers who work in a Multimedia Super Corridor (MSS) status companies in Malaysia. Factors analysis and multiple regression were applied for analyzing the data.	Pro-innovation work climate, Leader-Member exchange, Social capital and Innovative work Behavior.	LMX and social capital were found to be strongly and positively associated to IWB. According to the authors when employees believed their efforts were fairly rewarded by their leader, the importance of LMX on their IWB led in them responding more innovatively to increased levels of

			job demands.
Schermuly, Meyer & Dämmer (2013)	Time-lagged questionnaire study with a sample of 225 general working people in Germany. SEM was used to analyze the data.	LMX, Innovative work behavior and Psychological empowerment.	LMX had no direct effect on subsequent innovative behaviors. Psychological empowerment was found to fully mediate the LMX-IWB association.
Zhao, Kessel & Kratzer (2013)	Time-lagged research design was used. 358 supervisor-subordinate dyads in a large Chinese diversified company were taken as sample. CFA, correlation and multi-step regression were applied for data analysis.	LMX, Perceived LMX differentiation, Perceived insider status, Employee creativity	LMX and employee creativity are positively related and this relationship is mediated by perceived insider status.
Turek & Wojtczuk (2013)	Cross-sectional study which surveyed 201 employees from Polish firms of diverse business and size. Regression analysis was adopted.	LMX, Organizational justice and IWB	There is significant positive relationship between LMX and IWB. Also, organizational justice has positive relationship with IWB.
Taştan & Davoudi, 2015	A structured research survey was performed and data were collected	LMX, Trust in leader and IWB	LMX quality had positive influence on trust in leader,

	from a sample of 327 non-supervisory employees that represented corporations and medium size companies from different sectors operated in Turkey. SEM was used to analyze the data.		but the influence of LMX was not significant on employees' IWB. Moreover, the results revealed that trust in leader had positive influence on IWB and significantly moderated the relationship between perceived LMX quality and IWB of employees.
Qu, Janssen & Shi (2015)	Cross-sectional design with survey among 193 leader–follower dyads from two high-tech companies in mainland China.	LMX, Leader creativity expectations, follower creativity expectations, Follower creativity	There is a positive and significant relationship between LMX and follower creativity when either leaders or followers, or both leaders and followers, set high expectations for creativity.
Wang, Fang, Qureshi & Janssen (2015)	Online survey of 135 employees from an entrepreneurial firm in Southeast China was administered. SEM was used for data analysis.	Out-group weak ties, LMX, Individual innovation, Within-group strong ties	There is a positive and significant relationship between LMX and innovative behavior given that the number of

			within-group ties is low.
Akram, Lei & Haider (2016)	Cross-sectional design in which a self-administered questionnaire was used to find out what are the responses of 261 employees from an IT company. Data were analyzed using correlation and regression analysis.	Relational leadership, Idea generation, Idea promotion and Idea realization and Employee innovative work behavior.	There is a positive and significant relationship between relational leadership and employee innovative behavior.
Carnevale, Huang, Crede, Harms & Uhl-Bien (2017)	This study meta-analytically reviews the findings of research relating leader–member exchange (LMX) to voice (37 samples), creativity (53 samples), and innovative behavior (29 samples).	Employee voice, Creativity, Innovative behavior, LMX	LMX positively predicts voice, creativity, and innovative behavior. Moreover, LMX is more strongly related with creativity than with voice or innovative behavior.
Rauniyar, Ding & Rauniyar (2017)	Sample of 325 full-time employees from 17 companies covering six industries in the central and eastern development regions of Nepal. Multiple regression analysis was used for data analysis.	Abusive supervision, Creative self-efficacy, Employee's creativity	Abusive supervision is negatively related to employee creativity and this relationship is fully mediated by creative self-efficacy.
Khalili (2018)	Cross-sectional design	LMX,	There is positive

	for which data were gathered from 1221 employees working in organizations across various industries in Australia. Data were analyzed using structural equation modeling.	Employee's personal initiative, Employee's creativity and Employee's innovation.	and significant relationship between LMX and employees' creativity and innovation. Also, the findings indicated employees' personal initiative moderated these relationships.
Atitumpong & Badir (2018)	Cross-sectional study in which data were collected from 337 employees and 137 direct managers from manufacturing sector. Hierarchical linear model was used to test the hypotheses.	LMX, Creative self-efficacy, Employee learning orientation and Employee Innovative work behavior	LMX and employee learning orientation were positively related to employees' IWB, and these relationships were mediated by creative self-efficacy.
Park & Jo (2018)	Cross-sectional design with 1011 respondents from government employees in the Ministry of Education. Confirmatory factor analysis and structural equation modeling were used to analyze the data.	LMX, Climate for innovation, Proactivity and Innovative behavior	Proactivity and climate for innovation had positive relationships with innovative behavior; LMX had a positive relationship with proactivity although it did not

			have a direct relationship with innovative behavior.
Saeed, Afsar, Cheema & Javed (2018)	Cross-sectional design where data were collected from 323 employees and their immediate supervisors (121) from automotive industry. Moderated path analysis was used.	LMX, Domain knowledge, Core self-evaluation, Innovative work behavior	When core self-evaluation and domain knowledge were both high, LMX had the strongest positive relationship with innovative work behavior and creative process engagement mediated this relationship.
Wang, Liu & Shalley (2018)	Survey questionnaire was distributed across three organizations in Beijing, China. A total of 177 responses were collected. CFA and step-wise regression analysis is applied.	Developmental i-deals, Flexibility i-Deals, Creative self-efficacy, Employee creativity	Developmental i-deals have a positive impact on creativity through the full mediation of CSE.
Zhang & Zhou (2019)	Quantitative survey method is applied. 272 supervisor-subordinate dyads from Southeastern China were taken as sample. CFA and multi-level hypothesis testing tools were used to	LMX, Vertical task conflict, Vertical relationship conflict, Employee creativity	LMX was found to negatively influence employee creativity by suppressing vertical task conflict for

	analyze the data.		subordinates in high-quality LMX relationships, while the indirect effect was not significant for subordinates in low-quality LMX relationships.
Tarkang, Nange & Ozruten (2020)	Cross-sectional design was adopted. A total of 272 usable responses were collected from employees of 3 and 4 star hotels in the South-west region of Cameroon. Correlation, regression, factor analysis and path analysis were used.	LMX, Employee work engagement, Employee voice behavior, Employee work engagement and Innovative work behavior.	Leader's positive interactive behavior could have an expressive influence on their follower's engagement levels, propagated their innovation.
Poudel (2020)	A quantitative study of SMEs in Pokhara, Nepal with 188 samples. Correlation and regression were used for data analysis.	Transformational leadership, Transactional leadership, Entrepreneurship orientation and Business performance	Transformational leadership is stronger predictor of entrepreneurial orientation and business performance than transactional leadership style.
Mascareño, Rietzschel & Wisse (2020)	A multiple study, multiple method correlational design with sample size of 118 leader-member dyads from Dutch organizations	LMX, Affect, Loyalty, Contribution, Professional respect, Employee	LMX had no direct effect on employee innovation, and that employee creativity fully mediated the

	and 398 employees in USA respectively. Correlation along with regression analysis was used for data analysis.	creativity and Employee innovation	relationship between LMX and innovation. In a follow-up two-wave field study of employees researchers found that the LMX dimension professional respect predicted innovation through creativity, while the other dimensions did not.

2.3 Research Gap

Despite there being a lot of research in LMX there is scope to still explore a number of other aspects of LMX. The results of a study that linked LMX and to IWB were unclear. Inconsistent relationships between LMX and IWB were discovered by Hammond et al. (2011) and Karin, Matthijs, Nicole, Sandra and Claudia (2010) and Schermuly et al. (2013) and Atitumpong and Badir (2018), on the other hand, discovered a favorable association between LMX and IWB. The findings of this study will contribute to the leadership literature by showing one of the processes through which the supervisor-subordinate relationship leads to increased IWB.

Most of the research is carried out in western countries and there is need to explore these relationships in a different context. Yukl (2006, as cited in Eberly, Johnson, Hernandez & Avolio, 2011) also mentioned the importance of context when it comes to research. LMX topics should be studied, especially when they are characterized in terms of reciprocal influence process that occurs between persons in a social

environment (Eberly et. al, 2011). Because human processes are context specific (Khatri & Budhwar, 2002), it is critical that scholars investigate relationships previously studied in Western countries in emerging economies (Grodzicki & Varma, 2011), rather than assuming that results can be generalized across cultures and contexts. Also there have been just a handful of studies that have studied LMX in the South Asian context.

Few researchers have shown their interest in leadership and its impact on organizational and employee related outcomes in Nepalese context. For example, Rauniyar et al. (2017) investigated the effect of abusive supervision on employee creativity and found that abusive supervision is negatively related to employee creativity and this relationship is fully mediated by creative self-efficacy. Authors further insisted to study employee creativity through other theoretical perspectives of leadership. Similarly, Poudel (2020) found transformational and transactional leadership style as well as entrepreneurial orientation exert significant positive influence over business performance. The study further indicated that transformational leadership is stronger predictor of entrepreneurial orientation and business performance than transactional leadership style. Author studied the leadership and performance from the owner's perspective only and suggested to study leadership and performance from employee's perspective as well. Shrestha (2012) studied relationship between leadership styles and employee and organizational outcomes in a Nepali telecommunication company. The findings supported the existing literature for significant impact of transformational leadership on individual and organizational outcomes.

Review of existing literature on leadership in Nepal suggests that LMX leadership style and its impact on employee innovative behavior still remains a relatively novel perspective which is yet to be explored in Nepalese context. As far as researcher's knowledge there has been limited studies conducted to explore the LMX and employee innovative behavior in IT sector in Nepal. Hence, in keeping with this line of thinking, this study investigates the relationship between LMX and in employee's IWB taking employee's creative self-efficacy as mediator in the context of the Nepalese IT industry.

2.4 Theoretical Framework

In this research the researcher has planned to examine the relationship between LMX quality and employee IWB along with the mediating effect of employee's creative self-efficacy. The researcher has developed the framework based on the literatures of Atitumpong and Badir (2018). The researcher will use LMX quality explained by four reliable dimensions; affect loyalty, professional respect and contribution suggested by Liden and Maslyn (1998) as independent variable, employees' IWB will be used as dependent variable, and employee's creative self-efficacy will be tested as mediating variable.

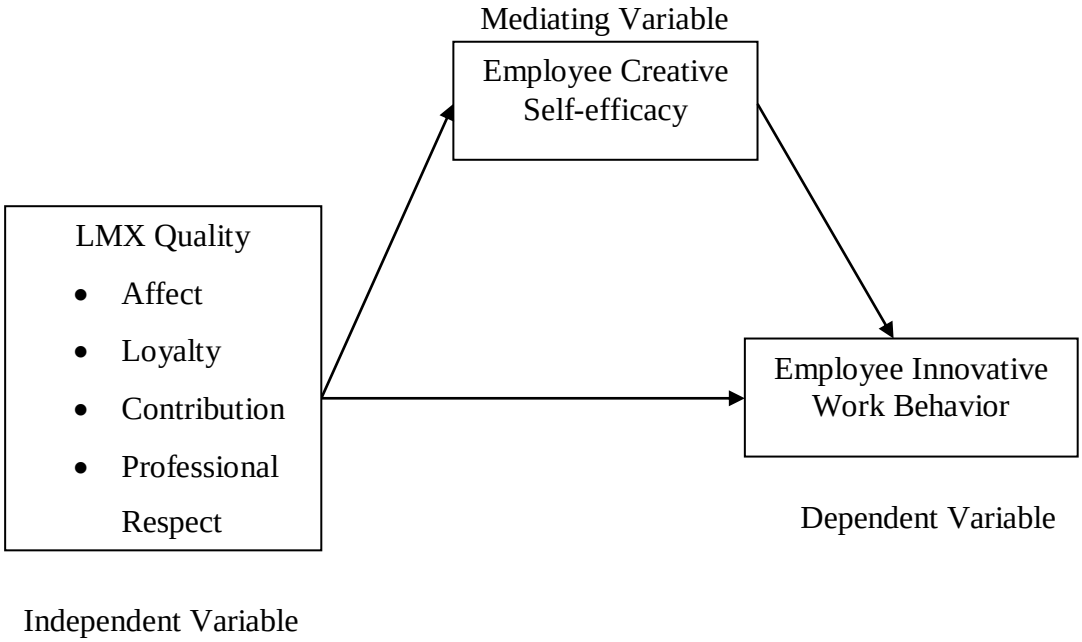

*Figure 2.*2 Theoretical Framework (Atitumpong & Badir, 2018)

2.5 Definition of the Terms

Innovative Work Behavior

Innovative Work behavior is referred to as the process of bringing new problem solving-ideas into use, thereby enhancing a product, service or process (Carmeli, Meitar & Weisberg, 2006). Janssen (2000) suggested that IWB might consist of idea

generation, idea promotion and idea realization.

Leader-Member Exchange (LMX)

Leader-Member Exchange (LMX) refers to a kind of relationship between leaders and employees cultivated through a series of exploration, observation, and interaction (Li, Liang, Yu & Dang, 2020).

Creative Self-Efficacy

Tierney and Farmer (2002) defined creative self-efficacy as the belief that one has the knowledge and skills to produce creative outcome. According to Mathisen and Bronnick (2009), when individuals are convinced that they have the necessary skills and knowledge to be creative, they persevere when meeting difficulties.

CHAPTER III

RESEARCH METHODS

The previous chapters presented the propositions of this thesis and their development through review of the existing literature. This chapter will introduce the research design employed to address the propositions. It shows the overall research design in details that has been adopted by the researcher. It also includes sample size and population, sources of data, data collection technique, data analysis and interpretation of data. Also, it deals with reliability of the data collection instruments and ethical issues of the study. Finally, it shows the overall basic framework of what methods and techniques which are used in the study.

3.1 Research Design

Research designs are broadly divided into quantitative studies and qualitative studies. Each design has a specific role, and each has both advantages and disadvantages (Mellis, 2020). Different research designs address different research questions. Therefore, before selecting a research design for study, researcher must know what types of research questions and research objectives are set. Research design provides the blueprint for conducting a research study and shapes what kind of knowledge is generated by the study (Cook & Cook, 2016). In this research, the primary objective of the researcher is to examine the impact of LMX quality on IT employee's IWB. Hence, in order to perform this research study, quantitative approach towards descriptive and explanatory casual research design has been used for empirically speculating the research objective. Self-administered survey has been conducted with the set of close ended questionnaire which provides quantitative data. Since data are collected at particular point of time, the research becomes cross-sectional in nature.

3.2 Population and Sample

The non-probability convenience sampling was applied to collect the desired data. The study has been conducted focusing the IT sector only. The larger population for this study consists of all the employees in all the departments at every level of the IT

sector having a direct supervisor. The representative sample size is based on the equation developed by Cochran (1963:75) which is;

$n= z^2*p*q/e^2$

Where,
n= Sample size
p = Population proportion with given characteristic
q = 1-p
z = Z value (e.g. 1.96 for 95% confidence level)
e= Error margin

For the unknown population it is recommended the value of p and q shall be set at 50%. By considering the confidence level of 95 %, with z value = 1.96 and sampling error e=5%.

$n = 50*50*(1.96)^2 /0.05^2=384$

Hence, the sample size determined from this formula would be 384 which is the sample size of this research. However, only 263 responses were received that makes the response rate of 68.50% which is considered to be suitable for this research.

3.3 Instrumentation

The survey was comprised of four sets of questions that were presented to respondents in this order: demographic questions, LMX questions, creative self-efficacy questions and innovative work behaviour questions. LMX Dimension measures are adapted from Liden and Maslyn (1998), creative self-efficacy is measured by scale developed by Karwowski, Lebuda and Sniewska (2018) and employee IWB is measured by the help of scale developed by Janssen (2000).

3.4 Reliability and Validity

Reliability is the extent to which we can rely on the source of the data and, therefore, the data itself. Reliable data is dependable, trustworthy, unfailing, authentic, genuine, and reputable. Consistency is the main measure of reliability. High quality reliability tests are important to evaluate the reliability of the data supplied in a research study (Tavakol & Dennick, 2011).

There are number of tools for conducting reliability test but the most commonly used tool is Cronbach's alpha. Calculating Cronbach's alpha has become common practice in research when multiple-item measures of a construct or concept are employed (Tavakol & Dennick, 2011). In general, data with alpha value ranging from 0.70 to 0.95 are considered to be reliable. A lower value of alpha could be due to low number of questions poor interrelatedness between items or heterogeneous constructs. This study also relies on Cronbach's alpha for testing the reliability of the data collected. The results of the reliability test are presented in table number 3.1.

Table 3.1

Cronbach's Alpha

Variables	Number of items	Cronbach's alpha (α)
Affect	3	0.897
Loyalty	3	0.911
Contribution	3	0.886
Professional Respect	3	0.912
Overall LMX	12	0.929
Creative Self-efficacy	8	0.911
Innovative Work Behavior	9	0.936

Table 3.1 symbolizes Cronbach's alpha for six different variables that have been used in this research. Since all the measures were positively worded none of them were reverse scored to avoid biased response. Then, the standardized values were computed to determine the individual scores of affect, loyalty, contribution, professional respect,

creative self-efficacy and innovative work behaviour. The table shows that affect, loyalty, contribution and professional respect have three items each with reliability statistics of 0.897, 0.911, 0.886 and 0.912 respectively. The Cronbach's alpha for overall LMX scale was 0.929. Creative self-efficacy has eight items and reliability statistics of 0.911. Finally, innovative work behavior has nine items with reliability statistics 0.936. Cronbach's alpha of all six variables are greater than 0.7. Therefore, the scales are considered to be reliable and consistent to measure the respective variables.

Validity on the other hand is the extent to which any measuring instrument measures what it is meant to measure (Thatcher, 2010). Validity is the most important and fundamental feature in the evaluation of any measurement instrument or tool for a good research (Mohajan, 2017). The content validity in this research has been established through a thorough literature review of the relevant theories. LMX and theory of innovation are well established in the literature providing adequate base for content validity in this study.

In the same way, construct validity in this study has been established through confirmatory factor analysis. Under construct validity, discriminant validity is the extent to which a latent variable discriminates from other latent variables. Whereas, convergent validity refers to the degree to which two or more measures of construct that should be theoretically related, are in fact related. Discriminant validity is confirmed through CFA via AVE, ASV and MSV, Fornell and Larcker (1981) criterion and HTMT criterion. Convergent validity is established through factor loading and the values of AVE. The collected data satisfied all the criteria for validity providing a green signal to further analysis.

3.5 Sources and Methods of Data Collection

This study is based on primary source where the data was collected from self-administered questionnaire to be rated by the employees in IT sector. The questionnaire contains questions related to respondent profile, LMX quality, creative self-efficacy and employee's innovative work behavior. A 7-point Likert scale was used for the sake of uniformity for measuring the variables under study. The

questionnaire was prepared in Google form and forwarded to the employees in IT sector via email. All the responses are collected electronically. The study was entirely based on fresh data collected from the employees working in the IT sector.

3.6 Data Analysis

For this research, the collected data was analyzed into two different stages. In the first stage, SPSS version 25 was used for the purpose of descriptive statistics about the respondents and the preliminary data analysis such as missing value, outliers and extreme values, mean and standard deviation. While in the second stage Structural Equation Modeling (SEM) were used to test and examine the relationships among variables within the proposed conceptual. This section briefly describes and justifies the use of SEM as the main data analysis technique used in the research.

SEM makes it easier to find and validate correlations between several variables. The link between many latent components may be evaluated in a method that lowers model error, which is perhaps the most essential strength of SEM (Hair, Sarstedt, Ringle & Mena, 2011). SEM analysis involves the simultaneous evaluation of multiple variables and their relationships (Hair, Gabriel & Patel, 2014). This feature enables assessment and ultimately elimination of variables characterized by weak measurement (Chin, Peterson & Brown, 2008). Covariance-based SEM (CB-SEM) and partial least squares-based SEM (PLS-SEM) are the two SEM-based approaches. CB-SEM uses a maximum likelihood approach to minimize the difference between the observed and estimated covariance matrices. PLS-SEM, on the other hand, aims to maximize the endogenous constructs' explained variance. As a result, the two techniques have a different focus, with CB-SEM being more suited to confirmatory factor analysis and PLS-SEM being better suited to exploratory work in identifying and analyzing causal links (Hair, Ringle & Sarstedt, 2013).

When the major goal of the study is theory testing and confirmation, covariance-based SEM is appropriate, whereas PLS-SEM is more appropriate when the main goal of the research is prediction and theory development. The present study is trying to test the existing strong theory on LMX and employee innovation with an adequate sample of 263 which provided a relatively normal data. Hence, a covariance-based

SEM approach is utilized to assess and analyze the data for the proposed model in the current study. Analysis of Moment Structures (AMOS version 24.0) is used as the statistical tool to run the CB-SEM. A two-step approach of CB-SEM was used for the data analysis. Initially, the measurement model was used to create the latent variables that will be used by the model and assign observed variables (indicators) to each. During this step researcher assessed whether the manifest variables accurately measure the theoretical constructs. This study was done with the reliability and validity criteria in mind. Confirmatory factor analysis was the basic tool for measurement model. The next step was structural modeling where researcher established the causal connections between the latent variables. The structural model was evaluated on the basis of the hypothesized links between the construct's meaning and relevance. Path analysis was conducted for structural modeling.

CHAPTER IV

ANALYSIS AND RESULTS

In this chapter the analysis is carried out in line with the objectives of the study. All the hypotheses framed are tested and the results discussed in detail. Appropriate statistical tools for data analysis are used to explain and interpret the data collected from the IT sector employees in Kathmandu. It includes respondent's profile, existing status of LMX quality, employee's creative self-efficacy and the innovative behavior. Further, the data are analyzed and tested for the effect of LMX on employee's innovative work behavior; both direct effect and the mediated by creative self-efficacy.

4.1 Demographic Profile of the Respondent

Table 4.9

Respondent's Profile

		Frequency	Percentage
Gender	Male	193	73.4
	Female	70	26.6
Age (in years)	20-30	188	71.5
	31-40	70	26.6
	41-50	5	1.9
Highest Educational Qualification	Intermediate Degree	2	0.8
	Bachelor's Degree	191	72.6
	Master's Degree	70	26.6
Job Type	Full Time	224	85.2
	Part Time	39	14.8
Functional Area	HR Management	18	6.8
	Accounting and Finance	36	13.7
	Administration	27	10.3

	Research and Development	89	33.8
	Quality Assurance	16	6.1
	Sales and Marketing	40	15.2
	Technical Support	22	8.4
	Others	15	5.7
Years in the Company	Less than 2 years	156	59.3
	2 – 5 years	98	37.3
	Over 5 years	9	3.4
Years under Current Supervisor	Less than 1 year	124	47
	1 – 3 years	123	47
	Over 3 years	16	6

Table 4.1 exhibits the demographic profile of the respondents belonging to IT sector of Kathmandu Valley. Respondents have been grouped in different demographic indications that include gender, age group, level of education, length of service, job type, functional area and length of service under current supervisor. This study consists of 263 respondents in total. Out of total 263 respondents, 73.4 percent were male and the remaining 26.6 percent were female. This shows that the majority of the respondents were male. In the table it can be observed that majority of the respondents fall under age group 20-30. 71.5 percent of the respondents belong to the age group 20-30, 26.6 percent belong to the age group 31-40 and only 5 of the respondents belong to the age group 41-50. In terms of educational qualification, 2 of the respondents have highest educational qualification of intermediate level, 72.6 percent of the respondents have bachelor degree and 26.6 percent have a master's degree. 85.2 percent of the respondents had been working as full type employee in the company and remaining 14.8 percent had been working as part time employee in the company.

Respondents were from diverse functional areas in their respective companies, however majority (33.8%) were working in Research and Development followed by

Sales and marketing (15.2%), Accounting and Finance (13.7%), Administration (10.3%), Technical support (8.4%), HR management (6.8%), Quality Assurance (6.1%) and others (5.7%). 59.3 percent of the respondents had been working in the company for less than 2 years, 37.3 percent for 2-5 years and only 9 respondents had been working in the company for more than 5 years. Of the total 263 respondents, an equal proportion (47%) have been working under present supervisor for less than 1 year and 1-3 years each while the remaining 6 percent of the respondents have been working under current supervisor for more than 3 years.

4.2 Status of Leader-Member Exchange Quality in IT Sector

One of the objectives of this study was to explore the current status of LMX leadership in Nepalese IT sector. For this, the respondents were asked to provide their level of agreement on various items related to LMX dimensions. These ratings were given using a seven-point metric: 1= Strongly Disagree to 7= Strongly Agree. Mean and standard deviation was used to assess the existing level of LMX quality perceived by subordinates in IT sector. The mean and standard deviation of all the items are reported in table 4.2.

Table 4.10

Descriptive Statistics for Leader-Member Exchange Quality

Opinion Statement	Mean	Std. Deviation
Affect	4.49	1.48
I like my supervisor very much as a person.	4.34	1.56
My supervisor is the kind of person one would have as a friend.	4.53	1.58
My supervisor is a lot of fun to work with.	4.59	1.71
Loyalty	4.01	1.42
My supervisor defends my work actions to a superior, even without complete knowledge of the issue in question.	3.41	1.51
My supervisor would come to my defense if I were "attacked" by others.	3.78	1.57

My supervisor would defend me to others in the organization if I made an honest mistake.	4.82	1.55
Contribution	5.00	1.26
I do work for my supervisor that goes beyond what is specified in my work description.	4.63	1.40
I am willing to apply extra efforts, beyond those normally required, to further the interests of my group.	5.05	1.35
I do not mind working hardest for my supervisor.	5.31	1.44
Professional Respect	4.57	1.28
I am impressed with my supervisor's knowledge of his/her job.	4.19	1.31
I respect my supervisor's knowledge and competence on the job.	4.57	1.38
I admire my supervisor's professional skills.	4.96	1.48
Overall LMX quality	4.52	1.12

Table 4.2 displays the subordinate's perception on LMX quality in IT sectors in Nepal. Descriptive statistics of LMX quality reveal an overall mean score of 4.52 (SD= 1.12). This shows a moderately positive perception of LMX quality among the employees. Amongst the individual dimensions of the LMX, contribution has the highest mean value of 5.00 (SD= 1.26). It implies that employees willing to contribute beyond their responsibility for their supervisor. Loyalty dimension has been rated lowest by employees with a mean value of 4.01 (SD= 1.42). This shows that employees are unsure about their leader defending them if they commit any mistakes at work. Respondents have moderately agreed upon having affection towards their supervisor and respecting the professional skills of their supervisor with a mean value of 4.49 (SD= 1.48) and 4.57 (SD= 1.28) respectively.

4.3 Status of Creative Self-Efficacy among IT Employees

Employees were asked for their opinion about their creative self-efficacy. Eight-item scale was used to generate these responses. These ratings were given using a seven-point metric: 1 = Strongly Disagree to 7 = Strongly Agree. Mean and standard

deviation for creative self-efficacy scale are reported in table 4.3.

Table 4.11

Descriptive Statistics for Creative Self-Efficacy

Opinion Statement	Mean	Std. Deviation
I will be able to achieve most of the goals that I have set for myself in a creative way.	4.57	1.30
When facing difficult tasks, I am certain that I will accomplish them creatively.	4.62	1.11
In general, I think I can obtain the outcomes that are important to me in a creative way.	4.66	1.21
I believe I can succeed at most any creative endeavor to which I set my mind.	4.68	1.25
I will be able to overcome many challenges creatively.	4.66	1.22
I am confident that I can perform creatively on many different tasks.	4.79	1.23
Compared to other people, I can do most tasks creatively.	4.60	1.15
Even when things are tough, I can perform quite creatively.	4.84	1.25
Overall creative self-efficacy	4.68	0.95

Descriptive statistics for creative self-efficacy reveal an overall mean score of 4.68 (SD= 0.95). This shows that employees agree that they have moderate level of creative self-efficacy. Employees feel that they have the ability to perform creatively during the difficult times with a highest level of agreement with a mean value of 4.84 (SD= 1.25). This is followed by the confidence among employees to perform different tasks creatively with a mean value of agreement 4.79 (SD= 1.23). The Lowest value of mean (M= 4.57, SD=1.30) is reported for the statement “I will be able to achieve most of the goals that I have set for myself in a creative way”. This means employees are only moderately positive that they can achieve most of the goals they set for themselves in a creative way. Overall, employees perceive themselves as individuals with moderate level of creative self-efficacy.

4.4 Status of Innovative Work Behavior among IT Employees

The dependent variable in this study is employee's innovative work behavior in the IT sector of Nepal. A nine-item scale was used to study the employee's perception regarding their innovative behavior at work. These ratings were given using a seven-point metric: 1 = Never, 2= Rarely, 3= Occasionally, 4= Sometimes, 5= Frequently, 6= Usually and 7 = Every Time. Mean and standard deviation for creative self-efficacy scale are reported in table 4.4.

Table 4.12

Descriptive Statistics for Innovative Work Behavior

Opinion Statement	Mean	Std. Deviation
I create new ideas for difficult issues.	4.17	1.40
I search out new technologies, processes, working methods, techniques, and/or product ideas.	4.45	1.33
I generate original solutions for problems.	4.47	1.33
I mobilize support for innovative ideas.	4.38	1.42
I introduce ideas into the work environment in a systematic way.	4.43	1.37
I evaluate the utility (Benefit) of innovative idea.	4.33	1.36
I transform innovative ideas into useful applications.	4.32	1.33
I make organizational members enthusiastic for innovative ideas.	4.42	1.41
I try to acquire approval for innovative ideas.	4.06	1.36
Overall innovative work behavior	4.34	1.11

Table 4.4 demonstrates employee's perception about how frequently they demonstrate innovative behaviors at work. Descriptive statistics show that the mean value for overall innovative work behavior is 4.34 (SD= 1.11). This indicates a moderate frequency of innovative work behaviors among employees in IT sector of Nepal. The highest value of mean (M= 4.47 & SD= 1.33) was for "I generate original solutions

for problems" followed by "I search out new technologies, processes, working methods, techniques, and/or product idea" with a mean value of 4.45 (SD= 1.33). It shows that employees are frequently involved in generating original solutions for the problem and search out new technologies, processes, methods, techniques and product idea. However, in terms of seeking approval for innovative ideas the employees reported a relatively lower frequency with the lowest mean value of just 4.06 (SD= 1.11).

4.5 Measurement Model

This study employed confirmatory factor analysis in order to examine the relationship among the different constructs and items within the proposed model. To assess the measurement model in CFA, researcher first considered the reliability and validity of the constructs and then evaluated the measurement model fit. In the CFA, there is no need to distinguish between endogenous and exogenous constructs while it is necessary during the model testing stage. CFA is frequently used to build and refine measurement instruments, as well as to assess construct validity, identify method effects, and evaluate factor invariance across time and groups. Researcher applied CFA to the proposed model with 29 indicators. The proposed model is presented in figure 4.1.

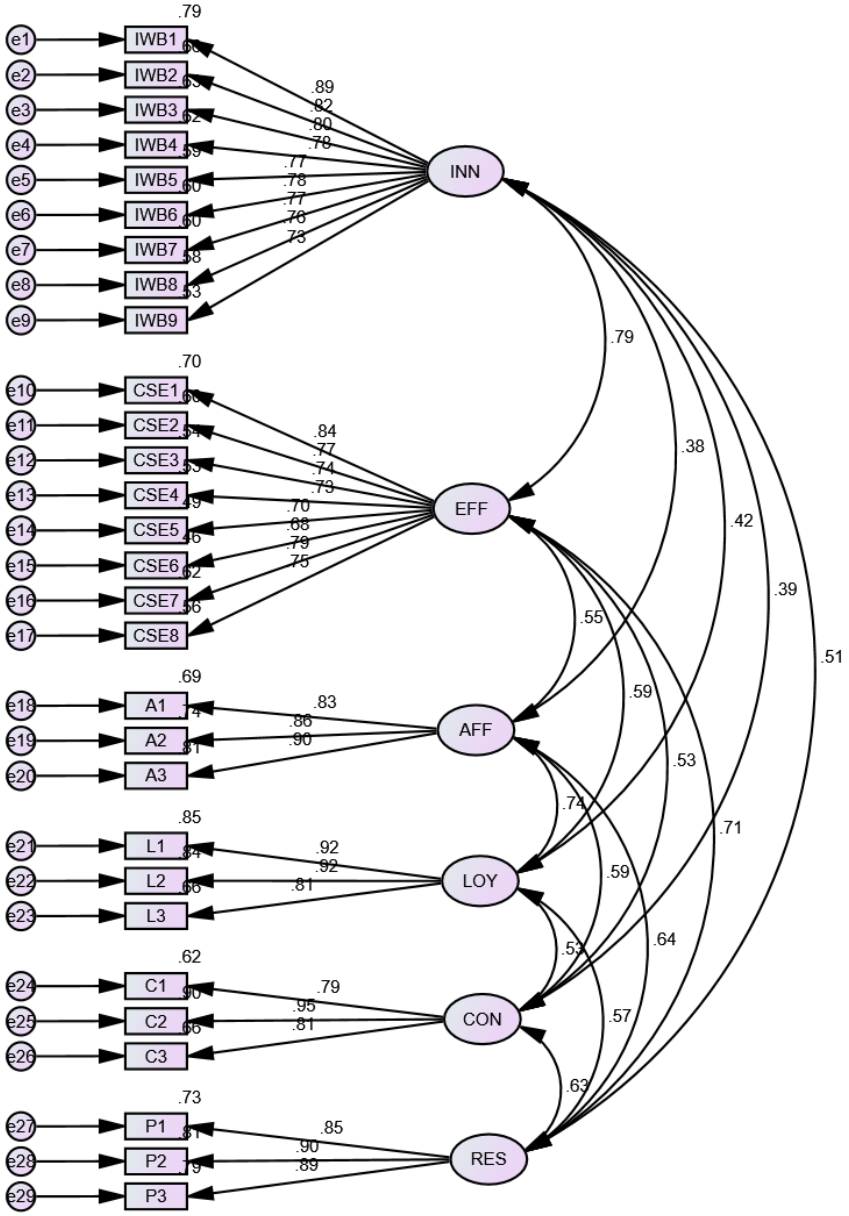

Figure 4.1 CB-SEM confirmatory factor analysis of the variables under study-Proposed Model

The model fit results on these 29 indicators showed validity as well as model fit issues. Hence, the items with highest degree of correlation with other items in different construct were screened out and ultimately dropped from the model. After dropping the items CSE1, CSE3 and CSE8, the CFA was re-run and this time there were no validity and model fit issues. Hence, a final model was proposed with a total of 26 items in which there are 9 items of innovative work behavior, 3 items for each

of the four dimensions of LMX and 5 items of creative self-efficacy. Figure 4.2 illustrates the final model after dropping three items from the initially proposed model.

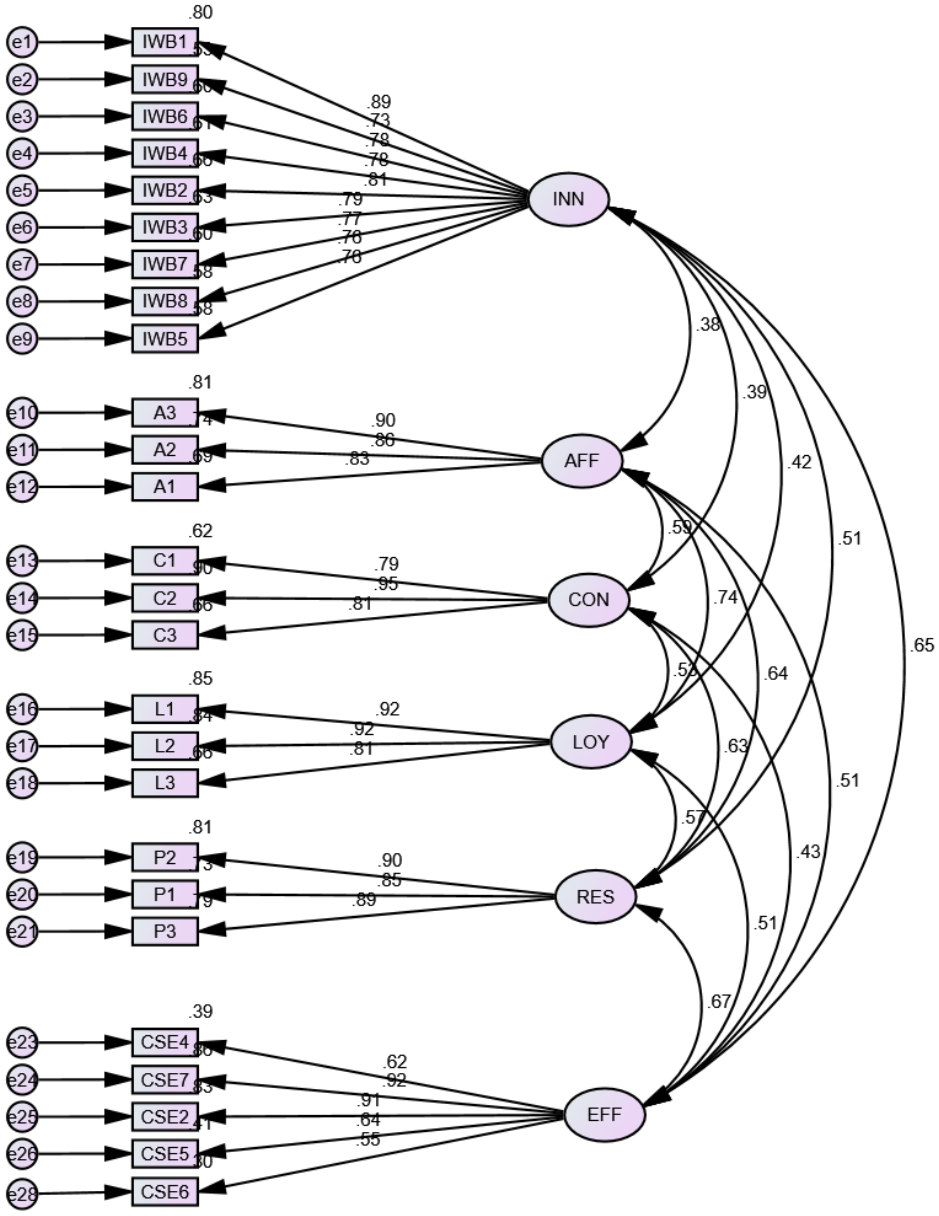

Figure 4.2 CB-SEM confirmatory factor analysis of the variables under study- Final Model

To estimate the model's parameters, researcher used the maximum-likelihood method, with all analyses performed on variance-covariance matrices (Hair, Black, Babin & Anderson, 2010). There are some fit indices that should be considered in order to assess the model goodness-of-fit (Kline, 2005; Hair et al., 2010). Table 4.5 shows the indices used to test the fitness of new measurement model after dropping three items CSE1, CSE3 and CSE8. Model fit indices indicate an overall fit for CFA model. CMIN/df is 1.866 which falls well below the threshold of less than 3 as suggested by Hu and Bentler (1999). Hu and Bentler (1999) suggested RMSEA should be less than 0.05 for a model to be good fit while Browne and Cudeck (1993) considered RMSEA value of less than 0.08 an acceptable degree of model fit. RMSEA in this model is 0.057 which suggests relatively good fit. AGFI is 0.824 which is above the threshold of 0.80 (Hu & Bentler, 1999). CFI is 0.953 which also shows excellent fit of model as it is above the provided threshold of 0.95 (Hu & Bentler, 1999). Similarly, PCFI and PGFI values are 0.832 and 0.694 are well above the threshold of 0.50 supporting the model fit (James, Mulaik & Brett 1982). IFI value must be above 0.90 (Bollen, 1990) and TLI should also be higher than 0.90 (Hu & Bentler, 1999). Both, IFI and TLI values in table 4.6 are 0.953 and 0.946 both above the threshold of 0.90 establishing good fit for CFA model. According to Hair et al. (2010), at least three indices must be fitted well for model to be fit. Hence, the CFA model in this particular study is tested to be fit because most of the model fit indices satisfied the suggested thresholds.

Table 4.5

Model Fit Indices for Final Measurement Model

Measures	Observed value of the model
□2	529.877
Degrees of Freedom (df)	284
CMIN/df	1.866
Root mean square error of approximation (RMSEA)	0.057
Adjusted Goodness-of-fit index (AGFI)	0.824
Comparative fit index (CFI)	0.953
Parsimony-adjusted CFI (PCFI)	0.832
Parsimony-adjusted (PGFI)	0.694
Incremental fit index (IFI)	0.953

Tucker–Lewis index (TLI)	0.946

The outputs of CFA were further assessed for analyzing the construct reliability, convergent validity and discriminant validity. The reliability of the constructs was measured by Cronbach's alpha. The scale reliability has been shown in methodological part. In this part the scale reliability after dropping the three items of CSE scale was presented again. Factor loading (FL), Composite Reliability (CR) and Average Variance Extracted (AVE) were used to test the convergent validity. Discriminant validity is established by the use of Average Variance Extracted (AVE), Maximum Shared Square Variance (MSV) and Average Shared Square Variance (ASV). To further assess the discriminant validity Fornell and Larcker (1981) and Heterotrait-Monotrait Ratio (HTMT) criteria were taken into consideration.

4.6.1 Reliability and Convergent Validity of the Final Model

The extent to which measures of a certain construct should converge or share a large proportion of variance is referred to as convergent validity. In other words, it's the degree to which two conceptions that should be correlated in theory are actually associated. The result of reliability and convergent validity is presented in table 4.6. The value of Cronbach's alpha and CR for all the constructs are higher than 0.70. This shows that there is satisfactory level of internal consistency of the measures and establishes the construct reliability of the final model. Convergent validity is established through factor loading and the values of AVE. Factor loadings for all the items except CSE6 are above threshold level of 0.6 (Chin, 1998). Hence, convergent validity is established. Convergent validity is further confirmed through estimation of AVE as recommended by Fornell and Larcker (1981), values must be greater than 0.5. All the constructs have AVE value higher than 0.5. All the criteria for convergent validity are satisfied to establish adequate level of convergent validity for the final model.

Table 4.6

Reliability and Convergent Validity

Constructs	Items	Factor Loadings	Cronbach's Alpha	CR	AVE
Affect (AFF)	A1	0.829	0.897	0.897	0.744
	A2	0.859			
	A3	0.899			
Loyalty (LOY)	L1	0.92	0.911	0.915	0.782
	L2	0.915			
	L3	0.813			
Contribution	C1	0.786	0.886	0.887	0.724
(CON)	C2	0.947			
	C3	0.812			
Professional	P1	0.854	0.912	0.912	0.777
Respect (RES)	P2	0.901			
	P3	0.888			
Creative Self-	CSE2	0.913	0.859	0.858	0.558
efficacy (EFF)	CSE4	0.624			
	CSE5	0.643			
	CSE6	0.548			
	CSE7	0.925			
Innovative Work	IWB1	0.893	0.936	0.937	0.623
Behavior (INN)	IWB2	0.813			
	IWB3	0.795			
	IWB4	0.784			
	IWB5	0.765			
	IWB6	0.777			
	IWB7	0.773			
	IWB8	0.764			
	IWB9	0.728			

4.6.2 Discriminant Validity of the Final Model

Discriminant validity is a test to ensure there is no significant variance among different variables that could have the same reason. Discriminant validity indicates to differentiate between one construct and another in the same model (Ghadi, Alwi, Abu Bakar, & Talib, 2012). Discriminant validity is measured by examining the correlation between the measures of the potential overlapping constructs (Fornell & Larcker, 1981). Table 4.7 illustrates the first criterion used to establish discriminant validity of the model. The MSV and the ASV results need to be lesser than the AVE for the discriminant validity (Hair et al., 2010). In table 4.7, MSV and ASV values are lesser than AVE values for all the variables establishing the discriminant validity. Discriminant validity is further confirmed with Fornell and Larcker (1981) criterion. According to this criterion square root of AVE must be greater than inter-construct correlations for establishing discriminant validity. Table 4.8 elucidates that the model satisfies this criterion for further confirming the discriminant validity. Finally, Heterotrait-monotrait ratio of the correlations (HTMT) approach suggested by Henseler, Ringle and Sarsted (2015) was also used to assess discriminant validity. Under HTMT approach, some authors suggest a threshold of 0.85 (Kline, 2011), whereas others propose a value of 0.90 (Henseler et al., 2015). All of the values in Table 4.9 are less than the required threshold values of $HTMT_{.85}$ by Kline (2011) and $HTMT_{.90}$ by Henseler et al. (2015), showing that discriminant validity is established for this study.

Table 4.7

Discriminant Validity with AVE, MSV and ASV

Variables	AVE	MSV	ASV
Innovative Work Behavior (INN)	0.623	0.417	0.229
Affect (AFF)	0.744	0.548	0.343
Contribution (CON)	0.724	0.391	0.271
Loyalty (LOY)	0.782	0.548	0.318
Respect (RES)	0.777	0.443	0.366
Creative Self-efficacy (EFF)	0.558	0.443	0.315

Table 4.8

Discriminant Validity with Fornell and Larcker (1981) Criterion

	INN	AFF	CON	LOY	RES	EFF
INN	0.789					
AFF	0.382***	0.863				
CON	0.389***	0.592***	0.851			
LOY	0.417***	0.740***	0.527***	0.884		
EFFE	0.508***	0.638***	0.626***	0.574***	0.881	
EFF	0.646***	0.515***	0.430***	0.513***	0.665***	0.747

Table 4.9

Heterotrait-monotrait Ratio (HTMT)

INN	AFF	CON	LOY	RES	EFF
INN					
AFF	0.393				
CON	0.367	0.587			
LOY	0.419	0.765	0.55		
RES	0.513	0.631	0.623	0.594	
EFF	0.764	0.591	0.505	0.598	0.721

4.7 Correlation between Variables

Pearson's correlation is used in this research to show the relationship between independent, dependent and mediating variable. Table 4.10 shows the relationship between LMX, its dimensions, creative self-efficacy and innovative work behavior.

Table 4.10

Correlation Matrix

	Affect	Loyalty	Contribution	Professional Respect	IWB	LMX

Affect	1					
Loyalty	.692**	1				
Contribution	.523**	.494**	1			
Professional Respect	.573**	.542**	.559**	1		
IWB	.359**	.388**	.334**	.474**	1	
LMX	.862**	.841**	.772**	.806**	.472**	1
CSE	.519**	.530**	.443**	.638**	.687**	.647**

**. Correlation is significant at the 0.01 level (2-tailed).

In the table 4.10, it can be observed that all the correlation coefficients are significant at p-value of 0.01. LMX and CSE share a relatively higher correlation (r= 0.647) which show positive relationship between the two. Likewise, CSE and IWB also share high positive correlation (r= 0.687) indicating that frequency of IWB when employees feel they have higher creativity. LMX and IWB have a moderately positive correlation (r= 0.472) which indicates that higher LMX quality increases frequency of IWB among employees but the relationship is only moderate. Among all the dimensions of LMX, professional respect has highest correlation with IWB (r= 0.474) followed by loyalty (r= 0.388), affect (r= 0.359) and contribution (r= 0.334). Professional respect has higher correlation with CSE (r= 0.638) followed by loyalty (r=0.530) affect (r= 0.519) and contribution r= (0.443). All four dimensions show higher correlation with overall LMX because they are averaged to get overall value of LMX.

4.8 Structural Model

Once the model's reliability, convergent validity, and discriminant validity have been proven, the next step is to examine the exogenous and endogenous variable's associations, which can be done during the structural model stage. There is a requirement to distinguish between dependent and independent variables, unlike the CFA. The causal relationship between an independent variable and a dependent variable is represented by a single arrow in SEM, but the covariance between the independent variables is assumed by two-headed arrows. As per the objectives and the hypothesis set for the study, at first a path with first order model was assessed for testing the hypotheses H2, H3, H4 and H5. Then, a path with second order model

including the mediating variable is assessed for testing the hypotheses H1 and H6.

4.8.1 Influence of LMX Dimensions on Innovative Work Behavior

The first path depicts the influence of four LMX dimensions with employee IWB. The path is demonstrated as figure 4.3. Model fit indices like CMIN/df= 1.454, RMSEA= 0.042, PCLOSE= 0.899, GFI= 0.914, AGFI= 0.889, CFI= 0.981, PCFI= 0.836, PGFI= 0.708, IFI= 0.981 and TLI= 0.977 show that the model is acceptable and fit to the data for further analysis (Hairet et al., 2010; Hu & Bentler, 1999). Summary of these indices is presented in table 4.11.

Table 4.13

Summary of Model Fit Indices for First-order Structural Model

Measures	Observed value of the model
□2	260.184
Degrees of Freedom (df)	179
CMIN/df	1.454
Root mean square error of approximation (RMSEA)	0.042
Goodness-of-fit index (GFI)	0.914
Adjusted Goodness-of-fit index (AGFI)	0.889
Comparative fit index (CFI)	0.981
Parsimony-adjusted CFI (PCFI)	0.836
Parsimony-adjusted (PGFI)	0.708
Incremental fit index (IFI)	0.981
Tucker–Lewis index (TLI)	0.977

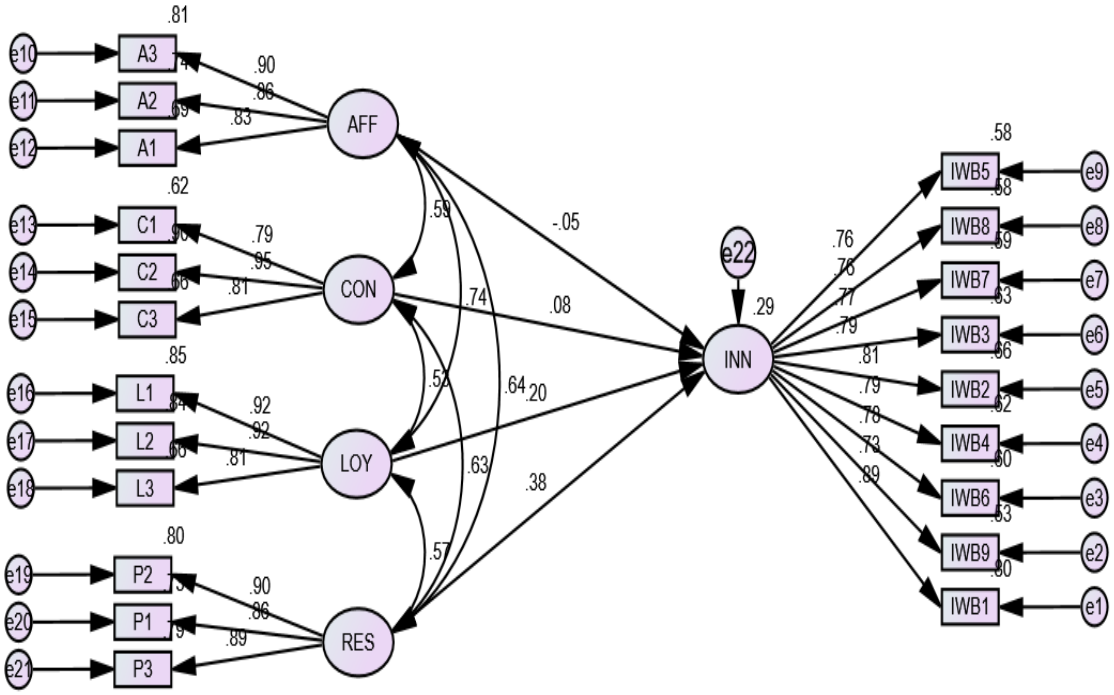

Figure 4.3 First-order Structural Model

In order to assess the effect of four LMX dimensions in employee's innovative work behavior first-order path analysis presented as figure 4.3 was assessed. Standardized regression weights are presented in the table 4.12.

Table 4.14

Standardized Regression Weights of the Model

Hypothesis	Exogenous	Path	Endogenous	Estimate	S.E.	p-value
H2	AFF	→	INN	-0.051	0.087	0.629
H3	LOY	→	INN	0.196	0.086	0.039
H4	CON	→	INN	0.079	0.093	0.338
H5	RES	→	INN	0.379	0.091	***
						R^2=0.29

The results in table 4.12 show that 29% of total variance in innovative work behavior is explained by the model as a whole (R^2= 0.29). The regression weights indicate that only two out of four hypothesized relationships are supported. More specifically, affect (β= -0.051, p=0.629) seems to have a negative influence on IWB. However, the magnitude of influence is not significant. Loyalty (β= 0.196, p<0.05) has significant positive influence on IWB. Next to this, contribution (β= 0.093, p=0.338) also has a positive effect on IWB but the effect is not significant enough. Professional respect (β= 0.379, p< 0.01) was found to have the strongest significant positive influence on IWB. The results from the path analysis supported the hypotheses H3 and H5 while H2 and H4 failed to get support. The summary of the hypotheses is given in the table 4.13.

Table 4.15

Summary of Hypotheses Test (H2, H3, H4 & H5)

Hypotheses	Result
H2: Affect influences employee's IWB.	Not Supported
H3: Loyalty influences employee's IWB.	Supported
H4: Contribution influences employee's IWB.	Not Supported
H5: Professional respect influences employee's IWB.	Supported

4.8.2 Mediation Effect of Creative Self-Efficacy between Leader-Member Exchange and Employee's Innovative Work Behavior

A second-order path analysis was used to examine the influence of overall LMX quality on employee's innovative work behavior and the mediating effect of creative self-efficacy in between LMX and employee's innovative work behavior. Path analysis is demonstrated as figure 4.4. Direct effect by the construct model was performed first and later the mediation effect was analyzed based on the hypotheses H1 and H6. The mediation test was performed with bootstrapping. The bootstrap estimates presented were based on 5000 samples and bias-corrected CI at 95%. Model fit indices like CMIN/df= 1.954, RMSEA= 0.060, AGFI= 0.818, CFI= 0.946, PCFI= 0.850, PGFI= 0.706, IFI= 0.947 and TLI= 0.940 show that the model is acceptable and fit to the data for further analysis (Hairet et al., 2010; Hu & Bentler, 1999).

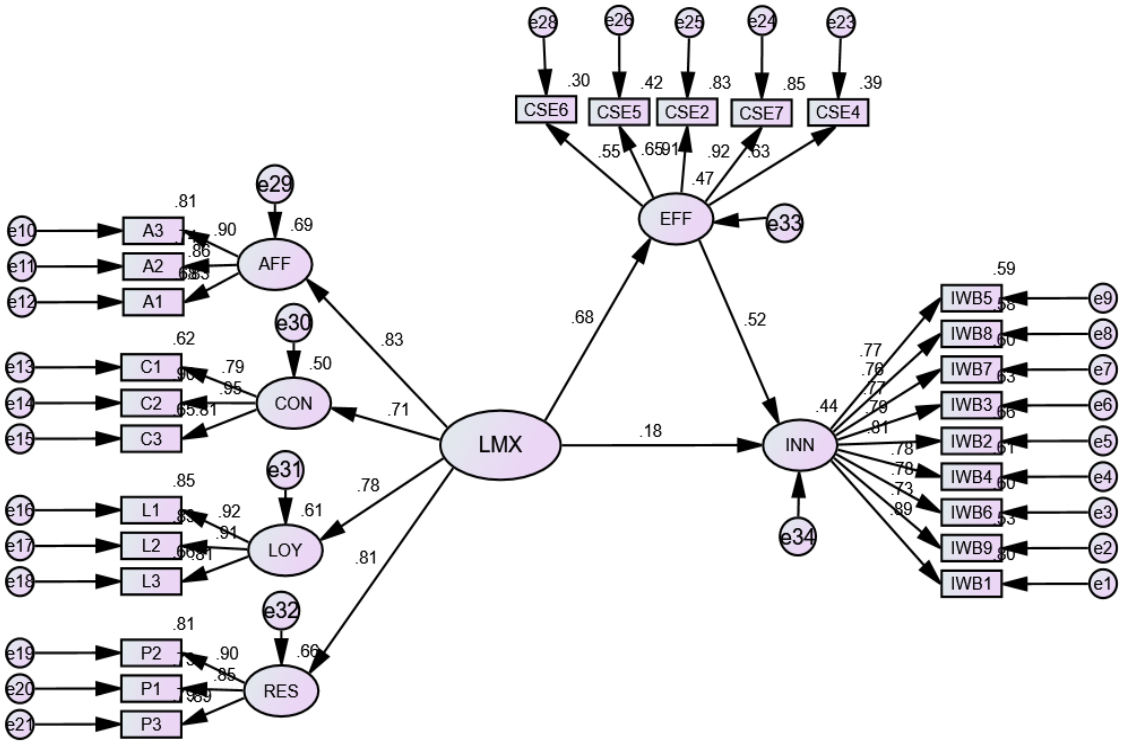

Figure 4.4 Second-order Path Analysis for Mediation

Path analysis presented in figure 4.4 provides a model to test the hypotheses H1 and H6. The results of the path analysis are presented in table 4.14.

Table 4.16

Summary of Total, Direct and Indirect Effect

Effect	Standardized Estimate	P value	Result	Mediation Type Observed
Total effect	0.531	***	Significant	Full Mediation
Direct effect	0.182	0.123	Not Significant	
Indirect effect	0.357	***	Significant	

The results in table 4.14 indicated that in absence of mediating variable, creative self-efficacy, there is significant positive impact of overall LMX quality (β= 0.531,

$p<0.01$) on innovative work behavior of employees. This result supports hypothesis H1 of this study. In the presence of mediating variable, creative self-efficacy, LMX quality ($\beta= 0.182$, $p= 0.123$) seems to have no significant effect on innovative work behavior. However, the indirect effect of LMX on innovative work behavior in presence of mediating variable, creative self-efficacy ($\beta= 0.357$, $p<0.01$), is significant. Hence, the results from the bootstrapping method for mediation suggested that creative self-efficacy fully mediated the relationship between LMX quality and employee's innovative work behavior. Thus, hypothesis H6 found supportive results from the path analysis.

Table 4.17

Summary of Hypotheses Test (H1 and H6)

Hypotheses	Result
H1: LMX quality influences employees innovative work behavior.	Supported
H6: Employee creative self-efficacy mediates the relationship between LMX quality and employee Innovative Work Behavior	Supported

4.9 Major Findings

The key findings of the study are summarized as follows:

- The research was conducted among the employees of the IT sector within Kathmandu valley. Out of total 263 respondents, 73.4 percent were male indicating a dominance of male employees in respondent's pool.

- Among the respondents, 71.5 percentages belong to the age group 20-30 reflecting younger IT personnel's participation in the study. 85.2 percent of the respondents have been working as full type employee in the company and remaining 14.8 percent have been working as part time employee in the company.

- In terms of education, only 2 respondents had a highest qualification of

intermediate level while all the others had completed at least bachelor's degree, suggesting that majority of the respondent were well qualified.

- Only 9 respondents had been working in their current company for more than 5 years, while majority (59.3%) of the respondents had just started their stint with company as they have been working in the company for less than 2 years.

- Respondents were from diverse functional areas in their respective companies, however majority (33.8%) were working in Research and Development followed by Sales and marketing (15.2%), Accounting and Finance (13.7%), Administration (10.3%), Technical support (8.4%), HR management (6.8%), Quality Assurance (6.1%) and others (5.7%).

- Almost all the respondents have reported having a direct supervisor/leader and an equal proportion (47%) have been working under present supervisor for less than 1 year and 1-3 years each while the remaining 6 percent of the respondents have been working under current supervisor for more than 3 years.

- Amongst the four dimensions of the LMX, contribution has the highest mean value of 5.00 (SD= 1.26) suggesting that employees are willing to contribute beyond their responsibility for their supervisor. Loyalty dimension has been rated lowest by employees with a mean value of 4.01 (SD= 1.42) indicating that employees are unsure about their leader defending them if they commit any mistakes at work. Respondents have moderate level of positive perception about other two dimensions affect and professional respect. Employees agree that there is a moderate quality of overall LMX with mean value of 4.52 (SD= 1.12).

- Employees in IT sector perceive that they have a moderate level of creative self-efficacy as the mean value is 4.68 with a standard deviation of 0.95.

- The mean value for overall innovative work behavior is 4.34 (SD= 1.11). This indicates a moderate frequency of innovative work behaviors among employees in IT sector.

- H1 is supported ($\beta = 0.531$, $p<0.01$) indicating a significant positive effect of overall LMX quality on employee's innovative work behavior. Better exchange relationship between leader and subordinates will encourage employees to perform innovatively.

- The results from path analysis couldn't support H2 as the $\beta = -0.051$ and $p>0.05$. This indicated that the influence of affect on employee's innovative work behavior is negative but not significant.

- H3 is supported ($\beta = 0.196$, $p<0.05$) suggesting a significant positive influence of loyalty on employee's innovative work behavior. It can be said that when employees feel that they have a mutually loyal exchange with their leader then they frequently show the innovative behavior at work.

- H4 fails to get support from the analysis ($\beta = 0.093$, $p=0.338$) indicating a positive effect of contribution on innovative work behavior but this effect is not significant.

- H5 is supported ($\beta = 0.379$, $p< 0.01$) by the data which indicated that if there is mutual professional respect between leader and subordinate then the subordinates will be involved in innovative behavior at work more often. There is strong significant influence of professional respect on employee's innovative work behavior.

- Amongst the four dimensions of LMX, professional respect was found to have the greatest impact on employee's innovative work behavior.

- Total effect of LMX quality on employee's innovative work behavior is significant ($\beta = 0.531$, $p<0.01$). However, direct effect is not significant when mediating variable is introduced in the model ($\beta = 0.182$, $p= 0.123$). But the indirect effect is significant ($\beta = 0.357$, $p<0.01$). Hence, the employee's creative self-efficacy fully mediated the relationship between LMX quality and employees innovative work behavior in IT sector.

CHAPTER V

DISCUSSION, CONCLUSION AND IMPLICATIONS

This chapter deals with the discussion, conclusion and implication of the study. Whole study has been summarized here in brief and draws the major conclusion of this research. Being based on the evidence provided by the past scholars in the relating factors of the research the potential implications have been provided for LMX and employee's innovative work behavior in IT sector of Nepal.

5.1 Discussion

This study empirically examined the effect of LMX and its dimensions on employee's innovative work behavior in IT sector of Kathmandu valley. Besides, the mediating role of employee's creative self-efficacy between LMX quality and employee's innovative work behavior is studied. The findings from this study contribute to the literature on leadership and its impact on employee creativity and innovativeness at work. More specifically, the findings of this study have expanded the previous results to generate additional ideas about interaction between LMX, CSE and employee's IWB.

In order to examine the impact of LMX quality on employee's innovative behavior in IT sector, the first step involved was to assess whether LMX style of leadership prevails in IT sector. The results from the data analysis indicated that there is moderate level of LMX leadership according to the employee's. Along with this, employee's perceptions about four dimensions of LMX namely, affect, loyalty, contribution and professional respect is moderately positive. Employees are found to perceive themselves as individuals having moderate level of creative self-efficacy. Likewise, a moderate frequency of IWB is demonstrated by employees in IT sector.

The findings of this study revealed that overall LMX quality has significant influence on employee's IWB in IT sector. This result is consistent with earlier research in which LMX was found to have an impact on employee innovation performance (Scott & Bruce, 1994; Basu & Green, 1997; Sanders et. al. 2010; Volmer et al. 2012; Munoz et al. 2012; Kheng et al. 2013; Turek & Wojtczuk, 2013; Carnevale et al., 2017;

Khalili, 2018; Atitumpong & Badir, 2018). This means that in order to deal with the current customs work procedures, employees and their leaders must have a strong bond. Employees demonstrated a considerable link with their supervisors in gaining innovative freedom. As a result, a leader–member relationship based on social exchange rather than financial transaction is thought to boost worker's innovative behavior.

This link between LMX quality and employee's IWB is supported by the theory of Graen and Uhl-Bien (1995) in which authors argued that the quality of a leader's relationship with a subordinate has a significant impact on the employee's behavioral consequences. This is because the quality of a supervisor-subordinate relationship can build an awareness of each person's responsibility, allowing the employee to feel empowered to explore their autonomy and decision-making latitude, and therefore improving their creativity (Graen & Uhl-Bien, 1995). The findings from this study show consistency with previous findings of Schermuly et al. (2013) and Volmer et al. (2012) that supervisors have an essential role in the innovation process, and leadership is a critical aspect in employee IWB. This is because the employee is more likely to be optimistic about how their actions would be seen by their superiors (Gumusluoglu & Ilsev, 2009). Also, leaders can give their followers the latitude and discretion necessary for creativity to occur in high-quality dyadic partnerships (Graen & Scandura, 1987). In this manner, the quality and dynamics of a leader-member exchange relationship are critical to the possibility of the employee actively engaging in IWB.

While examining the effect of four LMX dimensions separately, it was found that only two of them; loyalty and professional respect had significant influence on employee's IWB. The other two dimensions affect and contribution did not have any significant influence on employee's IWB. For professional respect the findings are in line with the findings of Mascareño et al. (2020) in which the researchers confirmed that professional respect predicted employee's IWB. This suggests that employees who thought their boss was competent and had relevant skills and expertise were more likely to be creative and innovative. One explanation for this might be that when employees perceive their leader as skillful and competent then they will not fear to try out new things because they are assured that if any problem occurs then leader will

help them out.

In the same way the significant positive impact of loyalty on employee's IWB is consistent with the findings of Maslyn and Uhl-Bien (2001). Hence, it can be said that social dimensions loyalty is significant predictor of employee's innovative behavior as it inspires employees to believe themselves and their supervisor. Employees with high perceived loyalty of LMX exchange expects to find support in case they made mistakes while trying new ideas, processes and methods. Hence, they try out new things leading to innovative behaviors at work. The effect of loyalty on employee's IWB was also supported by Lee (2008). However, Lee (2008) found that only loyalty dimension of LMX had significant influence on IWB and no other factors predicted employee's IWB which is contrary to one of the major the findings of this study related to effect of professional respect on IWB. One explanation for this can be the difference in measurement scale used. Lee (2008) used the adaptive-innovation inventory given by Kirton (1976) and current study used Janssen (2001) innovative work behavior scale. This resulted into difference in nature of dependent variable in the study. Also, Lee (2008) studied R&D professionals in Singapore which might have its own implications of cross-country cultural differences on LMX and innovative behavior. Shane (1993) suggested that national cultural values might result into differences in the ways how individuals and organizations innovate.

Affect dimension which is closely related to emotions and likeability of each-other in leader-member dyad was found to have negative effect on employee's innovative behavior. Emotion is an important link in people relationships, and it plays a significant role in interpersonal communication (Xie & Zhang, 2012). However, the reason behind negative influence of affect on IWB might be the cultural influence as in Nepal people who are attached emotionally might not want to challenge the existing procedures, processes and traditional ways. Thus close emotional ties between leader and subordinate might not encourage employees to involve in innovative behaviors.

This study also examined the mediating effect of creative self-efficacy on LMX and IWB relationship. From the existing literature on LMX and IWB relationship supported by the earlier findings of this study, it is clear that there is significant positive effect of LMX quality on employee's IWB when there is no mediating

mechanism for this association. But it is very important to note that this study found no direct effect of LMX on innovative behavior when the indirect effect via creative self-efficacy was considered. However, indirect effect of LMX on innovative work behavior through creative self-efficacy is significantly positive. Thus creative self-efficacy was found to fully mediate the relationship between LMX and employee's innovative work behavior. As a result, high-quality exchange between leaders and team members has a favorable impact on innovative behavior only because it boosts employee's creative self-efficacy. According to the findings, LMX has an impact on IWB only when employees are confident in their ability to engage in creative outputs. As a result, one of the ways by which LMX leads to greater future innovative behavior is elucidated in this work. This finding is in congruence with the findings of Atitumpong an Badir (2018).

A similar study conducted by Mascareño et al. (2020) found somewhat similar results where the impact of LMX on employee's innovative behavior is fully mediated by employee's creativity. Quality relationship between leader and employee heightens employee's creative self-efficacy (Terney & Farmer, 2002) which ultimately fills confidence among those employees who are closely related to leader. Leader in quality LMX accepts their employee's mistakes, encourage their participation, provides enough freedom to employee's at their work. Ultimately, better quality LMX results into frequent innovative behaviors on the part of employee through creative self-efficacy.

As far as researcher's knowledge, this study might be among the first ones to study the LMX theory and its impact on employee's innovative work behavior in Nepalese context. Furthermore, mediating effect of creative self-efficacy was assessed to a detailed idea of the mechanism through which LMX quality enhances innovative behavior among workers in IT companies of Kathmandu, Nepal. The findings of direct effect of LMX on IWB were consistent with most of the previous studies suggesting the need of maintaining high quality exchange relationships between leader and employees. At the same time full mediation mechanism through creative self-efficacy was also harmonious with the few earlier studies.

5.2 Conclusion

Today's business world is highly volatile and competitive. IT sector is rapidly growing and organizations are required to find out new ideas, products, processes and technologies for their sustainability. Employees are considered as one of the most important sources of organizational innovation. Hence, it becomes essential for managers and leaders to encourage their employees to be creative and generate innovative ideas by providing better work environment, creating quality relationship with them and by supporting their tendency to look for novelties. Literature on leadership and innovation has presented it as an important mechanism focusing on the relational approach which is also known as leader-member exchange.

The primary objective of this study was to examine the impact of LMX quality on employee's innovative behavior in IT sector. For assessing this mechanism first thing researcher did was to explore the prevailing level of LMX leadership in IT sector of Kathmandu. Specific objectives were to assess the influence of four LMX dimensions on IWB individually. Finally, mediating effect of creative self-efficacy was tested. From the analysis and results section presented in chapter IV, it is understood that overall LMX quality in IT sector in Kathmandu is perceived as moderately good by employee's working in IT sector. Furthermore, the quality of LMX significantly predicts the employee's IWB when there is no mediating mechanism. Amongst the four dimensions of LMX, only loyalty and professional respect had significant impact on employee's innovative work behavior while affect had negative influence on IWB but the effect was not significant. Contribution, on the other hand, had positive but weak influence on IWB which was not significant. Professional respect had the strongest influence on employee's innovative work behavior. Finally, creative self-efficacy fully mediated the relationship between LMX and employee's innovative work behavior.

To conclude, employees who reported higher quality relationship with their supervisor reported being more confident about their creative capability which in turn predicted higher level of innovative work behavior. Leaders and supervisors in IT sector must try to be more responsive, supportive and empathetic towards their employee's which employee's perceive positively and they reciprocate the same

resulting into a quality relation between them. It makes employee comfortable to advocate new ideas, find support for new ideas and implement those innovative ideas in organization. Thus, a proper mix of LMX dimensions should be installed into the work setup to enhance employee's creative self-efficacy which results into higher frequency of innovative behavior among employee in organization leading IT companies towards sustainable future.

5.3 Implication

The results of the current study have several implications for managers as well as for the future researchers. As the topic under study is relatively novel for Nepalese IT sector, it explores leadership in terms of leader-follower exchange mechanism to find out its effect on innovative behavior of employee's working in this sector. The results from this study are useful to managers who are leading these organizations to prioritize the things that come out as vital for innovation. Moreover, the findings from present study will provide a framework for future research to explore this mechanism in more detail.

5.3.1 Practical Implications

Individuals in the workplace face a daily challenge in successfully responding to the demand for innovation, especially when challenges and unexpected events arise (Javed et al., 2020). Managerial strategies and efforts are critical to innovation, including allocating flexible jobs to employees and allowing them to alter roles according to their interests, thereby promoting a creative mindset (Boer, Drejer & Mosey, 2005). Managerial initiatives also include encouragement and praise for new task participation (Tu & Lu, 2013). As a result, such practices are critical in pushing individuals to demonstrate IWB and organizational innovation. As such, this study has various managerial implications for IT companies, particularly in the context of Nepalese IT industry, in terms of successfully tackling new difficulties and improving products and services.

To begin, supervisors and employees who are seeking for innovation should recognize the value of actively participating in the development of unique relationships with one

another. As a result, leaders and employees should begin by supporting, encouraging, and understanding each other's needs in order to grow their relationships beyond formal ties. As this result suggested a significant positive influence of LMX quality on employee's IWB, supervisors must understand that relationships with their subordinates can have important consequences for organizations. Furthermore, leaders must defend their employees when they make honest mistakes or mistakes that occur while generating or implementing new ideas. Another thing that supervisors must take care of is their skill and competence. They must be able to remain updated, competent at their respective field of work and communicate the same to their employees to gain professional respect which will encourage employees to try out new things. Management can offer leadership training programs for supervisors to learn how to assure respect for employees, give feedback, and discover the development potential as well as needs of employees in order to improve the relationship quality between leaders and employees.

Finally, the indirect effect of LMX on employee's IWB through creative self-efficacy is significant and this can be one of the vital considerations for managers and recruiters. Test for evaluating creative-self efficacy can be included in the hiring process, so that innovative outcomes are obtained easily at minimum cost from right hiring of confident employees perceiving themselves as creative.

5.3.2 Implication for Future Research

The prime focus of the present study was to examine the influence of LMX quality and its four dimensions on employee's innovative work behavior in IT sector of Kathmandu valley. Another important aspect of this study was to see if creative self-efficacy mediates the relationship between LMX quality and employee's innovative work behavior. Even though several studies have been conducted in this area but as far as researcher's knowledge the LMX and innovative work behavior in Nepalese context is yet to be explored. Thus, the findings of this study can be helpful to future researchers aspiring to explore this area in more detail.

One of the limitations of present research is that we only looked at LMX from the perspective of the subordinate. Future research might look at LMX from both the

leader's and member's perspectives, allowing for a more thorough examination of the link between LMX and innovation through creative self-efficacy. Given our rationale, it makes sense to test our hypothesis with LMX as perceived by the subordinate, but it would be interesting to learn more about how LMX is perceived by the supervisor. Moreover, the design of this study is a constraint because it is cross-sectional. By gathering data at different times, longitudinal research would be able to better discuss the direction of links between the components of the current study. Finally, this study is limited only to IT sector of Kathmandu valley. The generalizability of data for other sectors will not be advisable. Thus, it will be interesting to explore status of LMX quality and examine the relationship between LMX and employee's Innovative behavior in other sectors as well.

References

Agarwal, U. A., Datta, S., Blake-Beard, S., & Bhargava, S. (2012). Linking LMX, innovative work behaviour and turnover intentions. *Career Development International, 17*(3), 208–230. doi:10.1108/13620431211241063

Akram, T., Lei, S., & Haider, M. J. (2016). The impact of relational leadership on employee innovative work behavior in IT industry of China. *Arab Economic and Business Journal, 11*(2), 153–161. doi:10.1016/j.aebj.2016.06.001

Amabile, T. M., Conti, R., Coon, H., Lazenby, J., & Herron, M. (1996). Assessing the work environment for creativity. *Academy of Management Journal, 39*(5), 1154–1184. https://doi.org/10.2307/256995

Anderson, N., Potočnik, K., & Zhou, J. (2014). Innovation and creativity in organizations. *Journal of Management, 40*(5), 1297–1333.doi:10.1177/0149206314527128

Aryee, S., & Zhen Xiong, C. (2006). Leader–member exchange in a Chinese context: Antecedents, the mediating role of psychological empowerment and outcomes. *Journal of Business Research, 59*(7), 793–801. doi:10.1016/j.jbusres.2005.03.003

Atitumpong, A., & Badir, Y. F. (2018). Leader-member exchange, learning orientation and innovative work behavior. *Journal of Workplace Learning*, *30*(1), 32–47. doi:10.1108/jwl-01-2017-0005

Bagheri, A., & Akbari, M. (2017). The impact of entrepreneurial leadership on Nurses' innovation behavior. *Journal of Nursing Scholarship, 50*(1), 28–35. doi:10.1111/jnu.12354

Bandura, A. (1997). Self-efficacy: The exercise of control. New York, NY: W.H. Freeman

Bandura, A. (2001). Social cognitive theory: An agentic perspective. *Annual Review of Psychology*, *52*(1), 1–26. doi:10.1146/annurev. psych.52.1.1

Bandura, A., & Locke, E. A. (2003). Negative self-efficacy and goal effects revisited. *Journal of Applied Psychology*, *88*(1), 87–99. doi: 10.1037/0021-9010.88.1.87

Battistelli A., Odoardi, C., Vandenberghe, C., Di Napoli, G. & Piccione, L., (2019). Information sharing and innovative work behavior: The role of work-based learning, challenging tasks, and organizational commitment. *Human Resource Development Quarterly*, 1-21. Doi*:* DOI: 10.1002/hrdq.21344

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

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

Boer, H., Drejer, A., & Mosey, S. (2005). Understanding new-to-market product development in SMEs. *International Journal of Operations & Production Management*, *25*(2), 114–130

Bollen, K. A. (1990). Overall fit in covariance structure models: Two types of sample size effects. *Psychological Bulletin*, *107*(2), 256–259. doi:10.1037/0033-2909.107.2.256

Browne, M. W., & Cudeck, R. (1993). Alternative ways of assessing model fit. *Sociological Methods & Research*, *21*(2), 230–258. doi:10.1177/0049124192021002005

Bruccoleri, M., & Riccobono, F. (2018). Management by objective enhances innovation behavior: An exploratory study in global management consulting. *Knowledge and Process Management*, *25*(3), 180–192. doi:10.1002/kpm.1577

Bunce, D., & West, M. A. (1995). Self perceptions and perceptions of group climate as predictors of individual innovation at work. *Applied Psychology: An International Review, 44*(3), 199–215. https://doi.org/10.1111/j.1464-0597.1995.tb01076.x

Burns, J. Z., & Otte, F. L. (1999). Implications of leader-member exchange theory and research for human resource development research. *Human Resource Development Quarterly, 10(3),* 225–248. doi:10.1002/hrdq.3920100304

Carmeli, A., Meitar, R., & Weisberg, J.(2006). Self leadership skills and innovative behavior at work. *International Journal of Manpower, 27*(1), 75 90. doi:10.1108/01437720610652853

Carmeli, A., & Spreitzer, G.M.(2009). Trust, connectivity, and thriving: Implications for innovative behaviors at work. *The Journal of Creative Behavior, 43*(3), 169–191. doi:10.1002/j.2162-6057.2009.tb01313.x

Carnevale, J. B., Huang, L., Crede, M., Harms, P., & Uhl-Bien, M. (2017). Leading to stimulate employees' ideas: A Quantitative review of leader-member exchange, employee voice, creativity, and innovative behavior. *Applied Psychology, 66*(4), 517–552. doi:10.1111/apps.12102

Cervone, D., & Peake, P.K. (1986). Anchoring, efficacy, and action: The influence of judgmental heuristics on self-efficacy judgments and behavior. *Journal of Personality and Social Psychology*, *50*, 492–501.

Chen, M. H., Chang, Y. Y., & Chang, Y. C. (2015). Entrepreneurial orientation, social networks and creative performance: middle managers as corporate entrepreneurs. *Creativity and Innovation Management*, doi: 10.1111/caim.12108.

Chin, W. W. (1998). Issues and opinion on structural equation modeling. *MIS Quarterly, 22* (1), vii-xvi

Chin, W. W., Peterson, R. A., & Brown, S. P. (2008). Structural equation modeling in marketing: Some practical reminders. *Journal of Marketing Theory and Practice, 16*(4), 287–298. doi:10.2753/mtp1069-6679160402

Choi, J. N. (2004). Individual and contextual predictors of creative performance: The mediating role of psychological processes. *Creative Research Journal, 16,* 187–199

Chong, E., & Ma, X. (2010). The influence of individual factors, supervision and work environment on creative self-efficacy. *Creativity and Innovation Management, 19*(3), 233–247. doi:10.1111/j.1467-8691.2010.00557.x

Cook, B. G., & Cook, L. (2016). Research designs and special education research: Different designs address different questions. *Learning Disabilities Research & Practice, 31*(4), 190–198. doi:10.1111/ldrp.12110

Cumming, B. S. (1998). Innovation overview and future challenges. *European Journal of Innovation Management, 1*(1), 21–29. doi:10.1108/14601069810368485

Damanpour, F. (1991). Organizational innovation: a meta-analysis of effects of determinants and moderators. *Academy of Management Journal, 34*(3), 555–590. doi:10.2307/256406

Dansereau, F., Graen, G. B., & Haga, W. (1975). A vertical dyad linkage approach to leadership in formal organizations. *Organizational Behavior and Human Performance, 13,* pp. 46-78.

Day, D. V. (2012). Leadership. In S. W. J. Kozlowski (Ed.), *The Oxford handbook of organizational psychology. 1,* pp. 696-729. New York: Oxford University

De Jong, J. P. J., & Den Hartog, D. N. (2007). How leaders influence employees' innovative behaviour. *European Journal of Innovation Management, 10*(1),

41–64. doi:10.1108/14601060710720546

De Jong, J. P. & Den Hartog, D. N. (2008). Innovative work behavior: Measurement and validation. *Creativity and Innovation Management*, *19*(1), doi:10.1111/j.1467-8691.2010.00547.x

De Jong, J., and Den Hartog, D. (2010). Measuring innovative work behaviour. *Creativity and Innovation Management*, *19*(1), pp. 23-36.

Denti, L., & Hemlin, S. (2012). Leadership and innovation in organizations: A systematic review of factors that mediate or moderate the relationship. *International Journal of Innovation Management*, *16*(03), 1240007. doi:10.1142/s1363919612400075

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. doi:10.1111/caim.12079

De Spiegelaere, S., Van Gyes, G., & Van Hootegem, G. (2016). Not all autonomy is the same. Different dimensions of job autonomy and their relation to work engagement and innovative work behavior. *Human Factors and Ergonomics in Manufacturing & Service Industries*, *26*(4), 515–527. doi:10.1002/hfm.20666

Dienesch, R. M., & Liden, R. C. (1986). Leader-member exchange model of leadership: A critique and further development. *Academy of Management Review*, *11*(3), 618–634. doi:10.5465/amr.1986.4306242

Dockery, T. M., & Steiner, D. D. (1990). The role of the initial interaction in leader-member exchange. *Group & Organization Studies*, *15*(4), 395–413. doi:10.1177/105960119001500405

Du, Y., Li, P., & Zhang, L. (2018). Linking job control to employee creativity: The

roles of creative self-efficacy and regulatory focus. *Asian Journal of Social Psychology, 21(3),* 187–197. doi:10.1111/ajsp.12219

Dulebohn, J. H., Bommer, W. H., Liden, R. C., Brouer, R. L., & Ferrir, 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,* pp. 1715-1759.

Eberly, M. B., Johnson, M. D., Hernandez, M., & Avolio, B. J. (2013). An integrative process model of leadership: Examining loci, mechanisms, and event cycles. *American Psychologist, 68*(6), 427–443. doi:10.1037/a0032244

Erdogan, B. & Liden, R. (2002). Social exchanges in the workplace: A review of recent developments and future research directions in leader-member exchange theory. Leadership. 65-114.

Fernandez, S., & Moldogaziev, T. (2012). Using employee empowerment to encourage innovative behavior in the public sector. *Journal of Public Administration Research and Theory, 23*(1), 155–187. doi:10.1093/jopart/mus008

Fornell, C., & Larcker, D. F. (1981). Structural equation models with unobservable variables and measurement error: Algebra and Statistics. *Journal of Marketing Research, 18*(3), 382-388. doi:10.2307/3150980

Gerstner, C.R., & Day, D.V. (1997). Meta-Analytic Review of Leader-Member Exchange Theory: Correlates and Construct Issues. *Journal of Applied Psychology, 82*, 827-844.

Gilso n, L. L., and Shalley, C. E. (2004). A little creativity goes a long way: An examination of teams' engagement in creative processes. *Journal of Management, 30*(4), pp. 453-470.

Ghadi, I., Alwi, N. H., Abu Bakar, K., & Talib, O. (2012). Construct validity

examination of critical thinking dispositions for undergraduate students in University Putra, Malaysia. *Higher Education Studies, 2*(20). doi:10.5539/hes.v2n2p138

Ghimire S., Abbott J. & Bhatti H. Transformational leadership and employee creativity in an Information Technology (IT) enterprises: Moderating role of openness to experience. *Journal of Entrepreneurship and Organization Management*, 10 (2021):297

Gong, Y., Huang, J., & Farh, J. (2009). Employee mastery orientation, transformational leadership, and employee creativity: The mediating role of employee creative self- efficacy. *Academy of Management Journal, 52*, 765–778. https://doi.org/10.5465/AMJ. 2009.43670890.

Gold, A. H., Malhotra, A., & Segars, A. H. (2001). Knowledge management: An organizational capabilities perspective. *Journal of Management Information Systems, 18*(1), 185–214. doi:10.1080/07421222.2001.11045669

Goswami, S., & Mathew, M. (2005). Definition of innovation revisited: an empirical study on Indian information technology industry. *International journal of innovation management, 09*(03), 371–383. Doi:10.1142/s1363919605001307

Graen, G. B., Liden, R. C., & Hoel, W. (1982). Role of leadership in the employee withdrawal process. *Journal of Applied Psychology, 67*(6), 868–872. https://doi.org/10.1037/0021-9010.67.6.868

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. https://doi.org/10.1016/1048-9843(95)90036-5

Graen, G. & Scandura, T. (1987). Toward a Psychology of Dyadic Organizing. Research in Organizational Behavior. *9*. 175-208.

Green, S. G., Anderson, S. E., & Shivers, S. L. (1996). Demographic and organizational influences on leader–member exchange and related work attitudes. *Organizational Behavior and Human Decision Processes, 66*(2), 203–214. doi:10.1006/obhd.1996.0049

Green, C. (2008). Leader member exchange and the use of moderating conflict management styles. *International Journal of Conflict Management, 19*(2*), 92–111*. doi:10.1108/10444060810856058

Grodzicki, J., & Varma, A. (2011). A comparative study of the impact of leader-member exchange in two samples: U.S.A. and Poland. *Organizations and markets in emerging economies, 2,* 1(3), doi: 10.15388/OMEE.2011.2.1.14286

Gu, Q., Hempel, P. S., & Yu, M. (2019). Tough love and creativity: How authoritarian leadership tempered by benevolence or morality influences employee creativity. *British Journal of Management.* doi:10.1111/1467-8551.12361

Gumusluoğlu, L. & Ilsev, A. (2009). Transformational leadership and organizational innovation: The roles of internal and external support for innovation. *Journal of Product Innovation Management*, *26*(3), pp. 264-277.

Hair, J., Black, W., Babin, B. & Anderson, R. (2010). Multivariate data analysis. 7th ed.NJ:PrenticeHall

Hair, J. F., Sarstedt, M., Ringle, C. M., & Mena, J. A. (2011). An assessment of the use of partial least squares structural equation modeling in marketing research. *Journal of the Academy of Marketing Science*, *40*(3), 414–433. doi:10.1007/s11747-011-0261-6

Hair, J. F., Ringle, C. M., & Sarstedt, M. (2013). Partial least squares structural equation modeling: Rigorous applications, better results and higher

acceptance. *Long Range Planning, 46*(1-2), 1–12. doi:10.1016/j.lrp.2013.01.001

Hair, J. F., Gabriel, M. & Patel, V. (2014). AMOS covariance-based structural squation modeling (CB-SEM): Guidelines on its application as a marketing research tool. *Revista Brasileira de Marketing*. *13*. 44-55. 10.5585/remark.v13i2.2718.

Hammond, M. M., Neff, N. L., Farr, J. L., Schwall, A. R., & Zhao, X. (2011). Predictors of individual-level innovation at work: A meta-analysis. *Psychology of Aesthetics, Creativity, and the Arts, 5*(1), 90–105. doi:10.1037/a0018556

Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science, 43*(1), 115–135. doi:10.1007/s11747-014-0403-8

Hootegem, A.V., Witte, H.D., Cuyper, N.D. & Elst, T.V. (2018). Job Insecurity and the Willingness to Undertake Training: The Moderating Role of Perceived Employability. *Journal of Career Development*. *46,* doi: 10.1177/0894845318763893

Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal, 6*(1), 1–55. doi:10.1080/10705519909540118

Jaishwal, N.K., & Dhar, R.L. (2015). Transformational leadership, innovation climate, creative self-efficacy and employee creativity: A multilevel study. *International Journal of Hospitality Management. 51,* 30-41

James, L. R., Mulaik, S. A. & Brett, J. (1982*). Causal analysis: Models, assumptions and data*. CA: Sage Publications.

Janssen, O. (2000). Job demands, perceptions of effort-reward fairness and innovative work behaviour. *Journal of Occupational and Organizational Psychology*, *73(3)*, 287–302. doi:10.1348/096317900167038

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. doi:10.5465/20159587

Javed, B., Khan, A. K., Arjoon, S., Mashkoor, M., & Haque, A. ul. (2018). Openness to experience, ethical leadership, and innovative work behavior. *The Journal of Creative Behavior*. doi:10.1002/jocb.360

Javed, A., Iqbal, J., Iqbal, S. M. J., & Imran, M. (2020). Sustainable leadership and employee innovative behavior: Discussing the mediating role of creative self-efficacy. *Journal of Public Affairs*. doi:10.1002/pa.2547

Javed, B., Fatima, T., Khan, A. K., & Bashir, S. (2020). Impact of inclusive leadership on innovative work behavior: The role of creative self-efficacy. *The Journal of Creative Behavior*. doi:10.1002/jocb.487

Kang, J. H., Solomon, G. T., & Choi, D. Y. (2015). CEOs' leadership styles and Managers' innovative behaviour: Investigation of intervening effects in an entrepreneurial context. *Journal of Management Studies*, *52*(4), 531–554. doi:10.1111/joms.12125

Karin, S., Matthijs, M., Nicole, T., Sandra, G. & Claudia, G. (2010). How to support innovative behaviour? The role of LMX and satisfaction with HR practices. *Technology and Investment*, *1*(1), pp.34-45

Karwowski, M. (2011). It doesn't hurt to ask... But sometimes it hurts to believe. Predictors of Polish students' creative self-efficacy. *Psychology of Aesthetics, Creativity, and the Arts*, *5*, 154–164

Karwowski, M. (2014). Creative mindsets: Measurement, correlates, consequences. *Psychology of Aesthetics, Creativity, and the Arts*, *8*, 62–70. https://doi.org/10.1037/a0034898

Karwowski, M. (2016). The dynamics of creative self-concept: Changes and reciprocal relations between creative self-efficacy and creative potential identity. *Creativity Research Journal*, *28*, 99–104.

Karwowski, M., & Barbot, B. (2016). Creative self-beliefs: Their nature, development, and correlates. In J.C. Kaufman & J. Baer (Eds.), *Cambridge companion to reason and development* (pp. 302–326). New York: Cambridge University Press.

Karwowski, M., Lebuda, I., & Wisniewska, E. (2018). Measurement of creative self-efficacy and creative role-identity. *High Ability Studies*.

Kauppila, O.-P. (2015). When and how does LMX differentiation influence followers' work outcomes? The interactive roles of one's own LMX status and organizational context. *Personnel Psychology*, *69*(2), 357–393. doi:10.1111/peps.12110

Kim, C., & Park, J. (2010). The global research-development network and its effect on innovation. *Journal of International Marketing*, *18*(4), 43-57. DOI: 10.1509/jimk.18.4.43

Kirton, M. (1976). Adaptors and innovators: A description and measure. *Journal of Applied Psychology*, *61*, 622–629. https://doi.org/10.1037/0021-9010.61.5.622

Kim, T., Liu, Z. & Diefendorff, J. (2014). Leader-member exchange and job performance: The effects of taking charge and organizational tenure. *Journal of Organizational Behavior*. *36*(2). Doi:10.1002/job.1971.

Khalili, A. (2018*)*. Creativity and innovation through LMX and personal initiative. *Journal of Organizational Change Management, 31*(2), 323–333. doi:10.1108/jocm-09-2016-0183

Khan, Z. A., Nawaz, A. & Khan, I. (2016). Leadership Theories and styles: A Literature review. *Journal of Resources Development and Management, 16,* 1-7.

Khar Kheng, Y., June, S., & Mahmood, R. (2013). The determinants of innovative work behavior in the knowledge intensive business services sector in malaysia. *Asian Social Science, 9*(15). doi:10.5539/ass.v9n15p47

Khatri, N., & Budhwar, P. S. (2002). A study of strategic HR issues in an Asian context. *Personnel Review, 31*(2), 166–188. doi:10.1108/00483480210416856

Khazanchi, S., Lewis, M. W., & Boyer, K. K. (2007). Innovation-supportive culture: The impact of organizational values on process innovation. *Journal of Operations Management*, *25*(4), 871–884. doi:10.1016/j.jom.2006.08.003

Kline, R. (2011). Principles and practice of structural equation modeling, 3rd edn Guilford Press. New York

Kroes, B. (2015). The relationship between transformational leadership and innovative work Behavior: The role of self-efficacy and the effect of perceived organizational support on innovative work behavior. Tilburg University.

Lapierre, L. M., & Hackett, R. D. (2007). Trait conscientiousness, leader-member exchange, job satisfaction and organizational citizenship behaviour: A test of an integrative model. *Journal of Occupational and Organizational Psychology, 80*(3), 539–554. https://doi.org/10.1348/096317906X154892

Lee, J. (2008). Effects of leadership and leader-member exchange on innovativeness. *Journal of Managerial Psychology, 23*(6), 670–687. doi:10.1108/02683940810894747

Li, C.-H., & Wu, J.-J. (2011). The structural relationships between optimism and innovative behavior: Understanding potential antecedents and mediating effects. *Creativity Research Journal, 23*(2), 119–128. doi:10.1080/10400419.2011.571184

Li, T., Liang, W., Yu, Z., & Dang, X. (2020). Analysis of the influence of entrepreneur's psychological capital on employee's innovation behavior under leader-member exchange relationship. *Frontiers in Psychology, 11*. doi:10.3389/fpsyg.2020.01853

Li, N., Liang, J., & Crant, J. M. (2010). The role of proactive personality in job satisfaction and organizational citizenship behavior: A relational perspective. *Journal of Applied Psychology, 95*(2), 395–404. doi:10.1037/a0018079

Liao, H., Liu, D., & Loi, R. (2010). Looking at both sides of the social exchange coin: A social cognitive perspective on the joint effects of relationship quality and differentiation on creativity. *Academy of Management Journal, 53*(5), 1090–1109. doi:10.5465/amj.2010.54533207

Li-Ying, J., Paunova, M., & Egerod, I. (2016). Knowledge sharing behaviour and intensive care nurse innovation: the moderating role of control of care quality. *Journal of Nursing Management, 24*(7), 943–953. doi:10.1111/jonm.12404

Liden, R. C., Sparrowe, R. T., & Wayne, S. J. (1997). Leader–member exchange: The past and potential for the future. *Research in personnel and human resources management ,15*, 47–119

Liden, R. C., & Maslyn, J. M. (1998). Multi-dimensionality of leader-member exchange: An empirical assessment through scale development. *Journal of Management, 24*(1), 43–72. doi:10.1177/014920639802400105

Liden RC, Erdogan B, Wayne SJ & Sparrowe RT. (2006). Leader–member exchange, differentiation, and task interdependence: Implications for individual and group performance. *Journal of Organizational Behavior, 27*, 723–746. doi: 10.1002/job.409

Liu, D., Jiang, K., Shalley, C. E., Keem, S., & Zhou, J. (2016). Motivational mechanisms of employee creativity: A meta-analytic examination and theoretical extension of the creativity literature. *Organizational Behavior and Human Decision Processes, 137*, 236–263. doi:10.1016/j.obhdp.2016.08.001

Luthans, F., Avolio, B. J., Avey, J. B., & Norman, S. M. (2007). Positive psychological capital: Measurement and relationship with performance and satisfaction. *Personnel Psychology, 60*(3), 541-572.

Mahsud, R., Yukl, G., & Prussia, G. (2010). Leader empathy, ethical leadership, and relations-oriented behaviors as antecedents of leader-member exchange quality. *Journal of Managerial Psychology, 25*(6), 561–577. doi:10.1108/02683941011056932

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

Mascareño, J., Rietzschel, E., & Wisse, B. (2020). Leader-Member Exchange (LMX) and innovation: A test of competing hypotheses. *Creativity and Innovation Management.* doi:10.1111/caim.12390

Maslyn, J. M., & Uhl-Bien, M. (2001). Leader–member exchange and its dimensions: Effects of self-effort and other's effort on relationship quality. *Journal of Applied Psychology, 86*(4), 697–708. doi:10.1037/0021-9010.86.4.697

Mathisen, G. E., & Bronnick, K. S. (2009). Creative self-efficacy: An intervention study. *International Journal of Educational Research*, *48*(1), 21

29. doi:10.1016/j.ijer.2009.02.009

Mellis, C. M. (2020). How to choose your study design. *Journal of Paediatrics and Child Health.* doi:10.1111/jpc.14929

Moghimi, S. (2016). *Creativity and Innovation in Hotels and Resorts: The Role of Leadership* [Doctoral dissertation, RMIT University] https://core.ac.uk/reader/43494939

Mohajan, H. (2017). Two Criteria for Good Measurements in Research: Validity and Reliability. *Annals of Spiru Haret University. 17*(3), 58-82

Mohr, L. B. (1969). Determinants of innovation in organizations. *American Political Science Review, 63*(01), 111–126. doi:10.1017/s0003055400261510

Muñoz-Doyague, M. F., & Nieto, M. (2012). Individual creativity performance and the quality of interpersonal relationships. *Industrial Management & Data Systems, 112*(1), 125–145. doi:10.1108/02635571211193671

Munton, A. G., & West, M. A. (1995). Innovations and personal change: Patterns of adjustment to relocation. *Journal of Organizational Behavior, 16,* 363-375.

Nakato, T. de C., & Wechsler, S. M. (2018). Creativity and innovation: Skills for the 21st Century. *Estudos de Psicologia (Campinas), 35*(3), 237–246. doi:10.1590/1982-02752018000300002

Nguyen, T. H. (2020). Impact of Leader-Member Relationship Quality on Job Satisfaction, Innovation and Operational Performance: A Case in Vietnam. *The Journal of Asian Finance, Economics and Business, 7*(6), 449–456. https://doi.org/10.13106/Jafeb.2020.

OECD (2005). Oslo Manual. Guidelines for collecting and interpreting innovation data (3rd edn.), Paris: OECD

Oldham, G. R., & Cummings, A. (1996). Employee creativity: Personal and contextual factors at work. *Academy of Management Journal*, *39*(3), 607–634. https://doi.org/10.2307/256657

Park, S., & Jo, S. J. (2018). The impact of proactivity, leader-member exchange, and climate for innovation on innovative behavior in the Korean government sector. *Leadership & Organization Development Journal*, *39*(1), 130–149. doi:10.1108/lodj-09-2016-0216

Park, J.Y., & Nawakitphaitoon, K. (2017). The cross-cultural study of LMX and individual employee voice: The moderating role of conflict avoidance. *Human Resource Management Journal*, *28*(1), 14–30. doi:10.1111/1748-8583.12158

Parker, S. K., Williams, H. M., & Turner, N. (2006). Modeling the antecedents of proactive behavior at work. *Journal of Applied Psychology*, 91(3), pp. 636-647.

Paudel, S. (2020). Leadership style and business performance in Nepali SMEs: The mediating role of entrepreneurship orientation. *Journal of Business and Management Research*, *3*(1), 1-17, doi: https://doi.org/10.3126/jbmr.v3i1.31971

Phillips, A. S., & Bedeian, A. G. (1994). Leader-follower exchange quality: The role of personal and interpersonal attributes. *Academy of Management Journal*, *37*(4), 990–1001. doi:10.5465/256608

Pot, F. (2011). Workplace innovation for better jobs and performance. *International Journal of Productivity and Performance Management*. *60*, 404-415, doi:10.1108/17410401111123562

Qu, R., Janssen, O., & Shi, K. (2015). Leader–member exchange and follower creativity: the moderating roles of leader and follower expectations for creativity. *The International Journal of Human Resource Management*, *28*(4),

603–626. doi:10.1080/09585192.2015.1105843

Raghuram, S., Gajendran, R. S., Liu, X., & Somaya, D. (2016). Boundaryless LMX: examining LMX's impact on external career outcomes and alumni goodwill. *Personnel Psychology*, *70*(2), 399–428. doi:10.1111/peps.12143

Rauniyar, K. , Ding, D. & Rauniyar, N. (2017) Understanding the role of creative self-efficacy and power distance orientation for examining the consequences of abusive supervision on employee creativity: A case study from Nepal. *Open Journal of Leadership*, *6*, 61-81. doi: 10.4236/ojl.2017.62004.

Riaz, S., Xu, Y., & Hussain, S. (2018). Understanding employee innovative behavior and thriving at work: a Chinese perspective. Administrative Sciences, *46*(8), doi: 10.3390/admsci8030046

Rowe, L. A., & Boise, W. B. (1974). Organizational innovation: Current research and evolving concepts. *Public Administration Review, 34*(3), 284. doi:10.2307/974923

Saeed, B. B., Afsar, B., Cheema, S., & Javed, F. (2018). Leader-member exchange and innovative work behavior. *European Journal of Innovation Management.* doi:10.1108/ejim-11-2017-0158

Sanders, K., Moorkamp, M., Torka, N., Groeneveld, S. & Groeneveld, C. (2010), How to support innovative behaviour? The role of LMX and satisfaction with HR practices. *Technology and Investment*, *01*(1), pp. 59-68. doi:10.4236/ti.2010.11007

Sarkar, S. (2011). A study on employee engagement at manufacturing industries. *Global Management Review, 5*(3), 62-72.

Schermuly, C. C., Meyer, B., & Dämmer, L. (2013). Leader-member exchange and innovative behavior. *Journal of Personnel Psychology*, *12*, pp. 132-142.

Scott, S. G., & Bruce, R. A. (1994). Determinants of innovative behavior: a path model of individual innovation in the workplace. *Academy of Management Journal*, *37*(3), 580–607. doi:10.2307/256701

Shane, S. (1993). Cultural influences on national rates of innovation. *Journal of Business Venturing*, *8*, 59–73. https://doi.org/10.1016/0883- 9026(93)90011-S

Shrestha, A. (2012). Leadership styles, subordinates' satisfaction with the leader and perceived effectiveness: A study in a Nepali telecommunications company. *Kathmandu University School of Management Occasional Paper*. *5*. 1-20.

Sigdel, B.R., Upadhyaya, S., & Basyal, D. (2020). Employee engagement: Status and drivers in Nepalese civil service, Lalitpur, Nepal: Nepal Administrative Staff College.

Sin, H. P., Nahrgang, J. D., & Morgeson, F. P. (2009). Understanding why they don't see eye to eye: An examination of leader–member exchange (LMX) agreement. Journal of Applied Psychology, *94*(4), 1048–1057. doi:10.1037/a0014827

Singh, S. K. (2011). Organizational innovation as competitive advantage during global recession. *Indian Journal of Industrial Relations*, *46*(4), 713-725.

Sothan, Y., (2016). A Study on correlation between leader-member exchange and employee creativity: The impacts of knowledge sharing and organizational commitment. *International Review of Management and Business Research*, *5*(2), 688-704

Tarkang, M., Nange, R.Y. & Ozturen A. (2020). Inspiring employee voice through leader–member exchange. *Journal of Public Affairs*. doi: 10.1002/pa.2317. https://doi.org/10.1002/pa.2317

Taştan, S. B., & 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*, 23–32. doi:10.1016/j.sbspro.2015.04.862

Tavakol M. & Dennick R. (2011). Making sense of Cronbach's alpha. *International Journal of Medical Education, 2*, 53-55, doi: 10.5116/ijme.4dfb.8dfd

Teng, C., Hu, C., & Chang, J. (2019). Triggering creative self-efficacy to increase employee innovation behavior in the Hospitality workplace. *The Journal of Creative Behavior*. doi:10.1002/jocb.419

Thatcher, R. W. (2010). Validity and reliability of quantitative electroencephalography. *Journal of Neurotherapy*, 14(2), 122–152. doi:10.1080/10874201003773500

Tierney, P., & Farmer, S. M. (2002). Creative self-efficacy: Its potential antecedents and relationship to creative performance. *Academy of Management Journal*, *45*(6), 1137 1148. doi:10.5465/3069429

Tierney, P., & Farmer, S. M. (2004). The pygmalion process and employee creativity. *Journal of Management*, *30*(3), 413–432. doi:10.1016/j.jm.2002.12.001

Tierney, P., & Farmer, S. M. (2017). Considering creative self-efficacy: Its current state and ideas for future inquiry. *The Creative Self*. http://dx.doi.org/10.1016/B978-0-12-809790-8.00002-9j

Tu, Y., & Lu, X. (2013). How ethical leadership influences employees' innovative work behavior: A perspective of intrinsic motivation. *Journal of Business Ethics*, 116, 441–455.

Turek, T. & Wojtczuk, A. (2013). Innovativeness in organizations: The Role of LMX and organizational justice: The case of Poland," Active Citizenship by knowledge management & innovation: Proceedings of the management, knowledge and learning international conference, ToKnowPress.

Tyssen, A. K., Wald, A., & Spieth, P. (2013). Leadership in temporary organizations: A review of leadership theories and a research agenda. *Project Management Journal, 44*(6), 52–67. doi:10.1002/pmj.21380

Udwadia, F. E. (1990). Creativity and innovation in organizations: Two models and managerial implications. *Technological Forecasting and Social Change, 38*(1), 65–80. doi:10.1016/0040-1625(90)90018-q

Unsworth, K. L., & Parker, S. (2003). Proactivity and innovation: promoting a new workforce for the new workforce. In D. Holman, T. D. Wall, C. W. Clegg, P. Sparrow, & A. Howard, The New Workplace: A Guide to the Human Impact of Modern Working Practices. Chichester: John Wiley & Sons

Van de Ven, A. H. (1986). Central problems in the management of innovation. *Management Science,* 32(5), 590–607. doi:10.1287/mnsc.32.5.590

Van Hootegem, A., Niesen, W., & De Witte, H. (2018). Does job insecurity hinder innovative work behaviour? A threat rigidity perspective. *Creativity and Innovation Management*. doi:10.1111/caim.12271

Volmer, J., Niessen, C., Spurk, D., Linz, A., & Abele, A. E. (2011). Reciprocal relationships between Leader-Member Exchange (LMX) and job satisfaction*:* A cross-lagged Analysis. *Applied Psychology*, *60*(4), 522–545. doi:10.1111/j.1464-0597.2011.00446.x

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

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

213. doi:10.1016/j.obhdp.2010.11.002

Wang, X.-H. F., Fang, Y., Qureshi, I., & Janssen, O. (2015). Understanding employee innovative behavior: Integrating the social network and leader-member exchange perspectives. *Journal of Organizational Behavior, 36*(3), 403–420. doi:10.1002/job.1994

Wang, S., Liu, Y., & Shalley, C. E. (2018). Idiosyncratic deals and employee creativity: The mediating role of creative self-efficacy. *Human Resource Management*. doi:10.1002/hrm.21917

Wayne, S. J., & Ferris, G. R. (1990). Influence tactics, affect, and exchange quality in supervisor-subordinate interactions: A laboratory experiment and field study. *Journal of Applied Psychology, 75*(5), 487–499. https://doi.org/10.1037/0021-9010.75.5.487

Xerri, M. (2012). Workplace relationships and the innovative behaviour of nursing employees: a social exchange perspective. *Asia Pacific Journal of Human Resources, 51*(1), 103–123. doi:10.1111/j.1744-7941.2012.00031.x

Xie, S., & Zhang, W. (2012). The relationships between transformational leadership, LMX, and employee innovative behavior. *Journal of Applied Business and Economics, 13*, 87–96.

Xerri, M. & Reid, S. R. M. (2017). Human resources and innovative behaviour: improving nursing performance. *International Journal of Innovation Managemen, 22*(02), 1850019. *doi:* DOI: 10.1142/S1363919618500196

Yu, D. & Liang, J. (2004). A new model for examining the leader – member exchange (LMX) theory. *Human Resource Development International*. *7*. 251-264. Doi:10.1080/1367886042000243826

Yukl, G. (2010). Leadership in Organizations. Upper Saddle River, NJ: Pearson.

Yukl, G., O´Donnel, M., & Taber, T. (2009). Influence of leader behaviors on the leader-member exchange relationships. *Journal of Management Psychology, 24*, pp. 289-299

Zawawi, N. F., Abd Wahab, S., Al-Mamun, A., Sofian Yaacob, A., Kumar AL Samy, N., & Ali Fazal, S. (2016). Defining the concept of innovation and firm innovativeness: A critical analysis from resorce-based view perspective. *International Journal of Business and Management,* 11(6), 87. doi:10.5539/ijbm.v11n6p87

Zhang, X., & Bartol, K. M. (2010). Linking empowering leadership and employee creativity: The influence of psychological empowerment, intrinsic motivation, and creative process engagement. *Academy of Management Journal, 53*(1), 107–128. https://doi.org/10.5465/AMJ.2010.48037118

Zhang, X., & Zhou, K. (2019). Close relationship with the supervisor may impede employee creativity by suppressing vertical task conflict. *R&D Management.* doi:10.1111/radm.12375

Zhao, H., Kessel, M., & Kratzer, J. (2013). Supervisor-subordinate relationship, differentiation, and employee creativity*: A Self-Categorization Perspective. The Journal of Creative Behavior, 48*(3), 165–184. doi:10.1002/jocb.46

APPENDICES

Appendix 1

Leader-Member Exchange and Its Impact on Employee Innovative Work Behavior: An Analysis of Nepalese IT Sector

Dear Respondent,

Namaste!

This questionnaire is a part of the study for a master's degree in Human Resources Management at School of Management, Tribhuvan University. This is a survey of your views about your work and your relationship with your supervisor. This is not a test and there is no right or wrong answers. Researcher wants to know your personal views on the issues raised in the survey. The survey consists of questions about yourself and your manager and refers to your attitudes and opinions.

Participation in this study is entirely voluntary and you have the right to withdraw at any time. This study is carried out purely for academic purposes and the information given will be treated with confidentiality. No one, other than the researcher will see your answers. This will take 5-7 minutes (on average) of your valuable time.

Please feel free to write at jaggisaud@gmail.com for any queries or concerns you may have.

Thank you for your valuable time and response!

PART I

Please indicate your current demographic information by writing the correct number in the box or filling in the empty lines:

Q1. Age Group ☐

1. 20-30
2. 31-40
3. 41-50
4. Above 50

Q2. Gender ☐

1. Male
2. Female
3. Other

Q3. Highest educational qualification completed ☐

1. Intermediate Degree
2. Bachelor's Degree
3. Master's Degree
4. Doctorate Degree
5. Other

Q4. Do you have a leader/ supervisor? ☐

1. Yes
2. No

Q5. How long have you been working under your leader/ supervisor? ☐

1. Less than 1 year
2. 1 – 3 years
3. Over 3 years

Q4. How long have you been working for this organization? ☐

1. Less than 2 years
2. 2 – 5 years
3. Over 5 years

Q5. Job Type ☐

1. Full – Time
2. Part – Time

Q6. What is your functional area? ☐

1. HR Management
2. Accounting and Finance
3. Administration
4. Research and Development
5. Quality Assurance
6. Sales and Marketing

7. Technical Support
8. Other

PART II

Please indicate your opinion about following aspect by writing the correct number in the answer box:

Quality of Leader-Member Exchange

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
1	2	3	4	5	6	7

	Affect	Degree of Agreement
i.	I like my supervisor very much as a person.	
ii.	My supervisor is the kind of person one would have as a friend.	
iii.	My supervisor is a lot of fun to work with.	
	Loyalty	
i.	My supervisor defends my work actions to a superior, even without complete knowledge of the issue in question.	
ii.	My supervisor would come to my defense if I were "attacked" by others.	
iii.	My supervisor would defend me to others in the organization if I made an honest mistake.	
	Contribution	
i.	I do work for my supervisor that goes beyond what is specified in my work description.	
ii.	I am willing to apply extra efforts, beyond those normally required, to further the interests of my group.	
iii.	I do not mind working hardest for my supervisor.	
	Professional Respect	
i.	I am impressed with my supervisor's knowledge of his/her job.	
ii.	I respect my supervisor's knowledge and competence on the job.	

iii.	I admire my supervisor's professional skills	

Creative Self-Efficacy

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
1	**2**	**3**	**4**	**5**	**6**	**7**

	Statement	Degree of Agreement
i.	I will be able to achieve most of the goals that I have set for myself in a creative way.	
ii.	When facing difficult tasks, I am certain that I will accomplish them creatively.	
iii.	In general, I think I can obtain the outcomes that are important to me in a creative way.	
iv.	I believe I can succeed at most any creative endeavor to which I set my mind.	
v.	I will be able to overcome many challenges creatively.	
vi.	I am confident that I can perform creatively on many different tasks.	
vii.	Compared to other people, I can do most tasks creatively.	
viii.	Even when things are tough, I can perform quite creatively.	

Innovative work Behavior

Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Every time
1	**2**	**3**	**4**	**5**	**6**	**7**

	Statement	Frequency
i.	I create new ideas for difficult issues.	
ii.	I search out new technologies, processes, working methods, techniques, and/or product ideas.	
iii.	I generate original solutions for problems.	
iv.	I mobilize support for innovative ideas.	
v.	I introduce ideas into the work environment in a systematic	

	way.	
vi.	I evaluate the utility (Benefit) of innovative idea.	
vii.	I transform innovative ideas into useful applications.	
viii.	I make organizational members enthusiastic for innovative ideas.	
ix.	I try to acquire approval for innovative ideas.	

THANK YOU FOR PARTICIPATING IN THE SURVEY!