Doctor of Philosophy

The Role of Shared Leadership and LMXD from

Ethical Leadership to Creativity:

A Multilevel Moderated Mediation Model

The Graduate School

of the University of Ulsan

Department of Business Administration

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The Role of Shared Leadership and LMXD from Ethical Leadership to Creativity: A Multilevel Moderated Mediation Model

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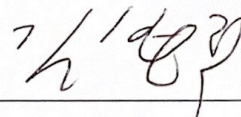for the Degree of

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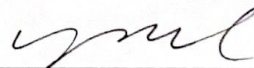
The Role of Shared Leadership and LMXD from

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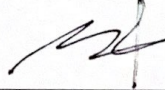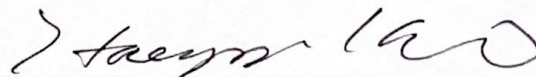The five most important years of my life were spent in Korea. These years are remembered as 24 building of business management department, late-night playgrounds, early-morning of UOU campuses. The times of study career in the professor, relatives, and friends of the strong support, go hard but also harvest full bag.

Great men and celebrities, worthy of worship, but I am more eager to give my respect and praise to an ordinary person, my supervisor Hae-Ryong Kim. I am not his best student, but he is the best and most important professor who leads me to the research life. The old saying goes, "Give a man a fish, and you feed him for a day.", "Teach a man to fish, and you feed him for a lifetime." My supervisor creates a good research atmosphere for me, be imperceptibly influenced by constantly sees and hears. In this way, I accepted new ideas, set ambitious academic goals, understood the fundamental way of thinking, and learned how to be a researcher. From the choice of the topic of the thesis to the guidance of the paper writing, through his careful guidance, and then through the understanding of thinking, let my study has room for progress.

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CONTENTS

ABSTRACT

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The organizations have turned to a team-based work structure to breed creativity facing the age of rapid change. The scholars have set about exploring how to bring creativity among employees and, moreover, how to develop creativity among teams. Amount of research indeed proved the supportive role of leadership in promoting creativity. Be identified issues and questions of individual creativity and team creativity, and ethical leadership remains largely space unexplored. Alongside hierarchical leadership, the effectiveness of shared leadership to creativity and innovation has been emphasized. Moreover, when traditional top-down leadership distributes to shared leadership, the group diversity may become contingent. LMX differentiation (LMXD) within the team is expected in a teamwork context. LMXD may impair social interaction.

In sum, this study proposed a homologous model and across level moderated mediation model attempted to contribute to the extent ethical leadership, shared leadership, leader-member exchange, and creativity literature in several ways: 1) this study highlighted ethical leadership as an antecedent to stimulate shared leadership; 2)

this study followed the calling for the research on vertical and shared leadership's relationship by exploring the ethical leadership's main effect and the shared leadership's mediating effect; 3) this study relied on allocation preferences theory to discuss the contingency effect of LMX differentiation (LMXD) to fulfill the path and relations between ethical and shared leadership; 4) this study based on role-theory perspective and social-relational and cognitive mechanism to explain how ethical leadership influences team members and team creativity through the mediation of shared leadership; 5) with the theorization of individual perspective and group perspective creativity, this study target to better understand the different levels of creativity and different pathways that ethical leadership at different levels relate to creativity with the interaction effect of LMXD through shared leadership.

With samples rated by 233 team members distributed in 30 teams, this study conducted two procedure analyses to examine the hypotheses. The results showed that both individual perceptions of ethical leadership and group ethical leadership positively relate to shared leadership. For team creativity, consistent with the predictions, ethical leadership positively affected team leader reported member creativity. This study recognized the partial mediating role of shared leadership on the team aggerated ethical leadership effect on team creativity. The result also recognized the full mediating role of shared leadership on the individual perceived leaders' ethical leadership effect on team creativity. Besides, team LMXD negatively moderated the relationship between ethical and shared leadership on both individual and team levels. Low LMXD in the

team could enhance and more potent the effect of ethical leadership on shared leadership. Furthermore, it is found that team LMXD negatively moderated the indirect impact of ethical leadership on members and team creativity via shared leadership. Specifically, for different levels, the influence is various.

The analysis offers significant theoretical and practical implications. This study is the first to examine vertical and shared leadership through the IPO model with the interaction effect of LMXD on the relationship between vertical and shared leadership. With the aim to discuss the catalytic agent mechanism of shared leadership, this study will contribute to fruitfully the research area of ethical leadership and shared leadership. Moreover, this study suggested that additional antecedents, moderator, and mediator variables expand the nomological networks of the various multilevel creativity constructs. Besides, through the multilevel moderated mediation model and comparing the effects, this study offered empirical findings to address the role of leadership and leader-member relationship in the creativity literature.

CHAPTER 1: Introduction

1. Research Background & Problem Discussion

Organizations constantly seek an answer to what variables support and reinforce the emergence and improvement of competitive advantage to have sustainable competitive power. Many organizations have turned to team-based work systems to increase their responsiveness and their ability to foster innovation. Such organizations need to be concerned with fostering creativity and innovation among individual employees and developing creative and innovative teams. However, it is unclear how leadership effect for creative teams differs from effect for creative individuals. In considering the theme of this current era issue on the antecedents of workplace creativity, research attention has been captured by a simple yet elusive question: In an interdependent team that strives to produce creative results, what are the antecedents for the creativity of individual team members? What is the relationship between leadership and individual creativity, even to overall team creativity, and at which of these levels do contextual factors influence?

To date, scholars have placed significant consideration on the contribution of leadership in promoting creativity via developing new and novel ideas. Numerous studies have found a positive relationship between ethical leadership and creativity. According to Ciulla (2003), ethics and integrity are the heart of the leadership and should be taken seriously for the success of the organization's business and long-term

survival. The majority of ethical management scholarship usually describes the influence of ethical leadership on societal learning outcomes or societal exchange (Brown & Treviño, 2006; Brown, Treviño, & Harrison, 2005; Chughtai, 2015). However, recently, some studies have called that ethical leadership into the level discussion. Feng, Zhang, Liu, Zhang, and Han (2018) introduced a curvilinear relationship between ethical leadership and employee creativity. Similarly, Mo, Ling, and Xie (2019) questioned how much ethical leadership is optimal for team creativity. The U-shaped effect of ethical leadership indicated that team leader abusive ethic is negatively related to creativity. Moreover, the founding of boundary conditions of ethical leadership increasing offered the potential limitation of ethical leadership (Quade, Perry, & Hunter, 2019). The academic literature of today offers limited insights into the question of how to prevent the inflection point and erase the barriers of the effect of ethical leadership.

Along with the increased use of teams in organizations, many scholars (Ensley, Hmieleski, & Pearce, 2006; Hoch, 2013; Pearce & Conger, 2003) believe that shared leadership represents an approach that may contribute to team innovative behavior, which known as "dynamic and interactive influence process" (Pearce & Conger, 2003) and emergence a series of formal and informal leaders (Zhu, Liao, Yam, & Johnson, 2018), offer an outlet for organizations to overturn the obstacle on sustainability (Kocolowski, 2010). While increasingly research has addressed the impact of shared leadership concerning predicting team and organizational performance in diverse

organizational settings (Ensley et al., 2006; Pearce & Sims, 2000). Nevertheless, more empirical research should still focus on investigating the impact of shared leadership at the individual and team levels. Furthermore, only limited research has addressed the effects of antecedents of shared leadership (Cox, Pearce, & Sims, 2003; Pearce & Sims, 2000). It is necessary to question vertical, formal team leaders' function in arousing shared leadership. Even though scholars recognize and stress the importance of empowering leadership, transformational leadership (Ensley et al., 2006; Hoch, 2013; Pearce & Conger, 2003), but as far as we know, no one study has addressed the importance of ethical leadership on shared leadership study. Moreover, many studies are still in the theoretical stage without the support of empirical research. In the current paper, we propose that an ethical team leader is the critical antecedent to shared leadership and offers empirical evidence.

Considering that ethical Leaders might foster relationships characterized by trust, liking, respect, and social exchange with some subordinates in their workgroups while maintaining distant relationships with others, realized in transactional exchanges (Liden & Maslyn, 1998). Therefore, the relationship between the team leader and each member is not identical. Based on social exchange theory and LMX theory, the differentiation, such as the individual experience quality of LMX and group levels of dispersion, was worth investigating that may influence the outcomes. Despite abundant research evidence for the beneficial results of high-quality LMX (Erdogan & Liden, 2002), LMXD as a group-level construct shows deleterious effects on the group

dynamic and explains when and how leaders' development has attenuated even invalidated on employees. Scholars pointed out that the matter issue is figuring out what condition this diversity or differentiation produces adverse outcomes and what situation it does in a reverse way (Schyns & Day, 2010; Yu, Matta, & Cornfield, 2018). Little is known, however, of how LMXD affects the ongoing team interaction among leadership effects.

To respond to the above literature problems and base on the above arguments, this study predicted that ethical leadership contributes to creativity by nurturing the formation of shared leadership in the workplace and developing employees' anticipation of fair reciprocation for their creativity and resource sharing by encouraging member to take the role of "leaders", then shared leadership is a crucial intermediary which removing the structural barriers hindering leadership member relationships. This study explained how LMXD interacts with the path from vertical leadership to shared leadership to understand the effect mechanism further.

2. Research Motivation

Combined with the research background mentioned above, this study motived by the remaining question on the field of ethical leadership and creativity. Ethical leadership, as a moral-based form of leadership, has attracted many interests since the 21st century. Why this study motivated by ethical leadership and possible consequences since the fruit of research on ethical leadership seems rich and plentiful? Firstly, ethics are essential to leadership, and ethical leadership is a critical leadership style different

from other mainstream leadership styles. Transformational leadership and authentic leadership are two ethics-related leadership theories. These three theories are often used for comparison. There are some aspects that are smudged each other, but there are more essential differences between the three leadership theories. First, morality, ethical behavior, and fairness are the central drivers in ethical leadership to influence and motivates their followers (Brown & Treviño, 2006), but these are not the key aspects of transformational leadership and authentic leadership. Transformational leadership is more visionary and profit-oriented, and such leaders motivate employee self-sacrifice, but ethical leadership rewards for proper behaviors and punishment for improper acts by building ethical standards (Mihelic, Lipicnik, & Tekavcic, 2010). Ethical leadership and authentic leadership share similarities such as social motivation and people orientation, and also, both are ethically principled leaders. However, some key attributes are part of authentic leadership, such as self-awareness and authenticity, which are not emphasized in ethical leadership (Brown & Treviño, 2006).

Second, according to Banks, Fischer, Gooty, and Stock (2021), the critical limitations of ethical leadership study are conflating conceptualization and potentially spurious evidence of causes and consequences of ethical leadership. Banks et al. (2021) suggested a future study to improve both theory and measurement of ethical leadership simultaneously. With the suggested model they offered, individual evaluation of leaders' ethical behavior should consider at the dyad and group level through emergence processes. This study followed their call for multilevel extension of

individual-level ethical leader behavior and responded to their appeal to improve ethical leadership measurement.

Besides, shared leadership is a relatively new leadership concept that is highly recommended to foster team performance and improve individual development. If there are doubts about the positive mechanism that ethical leadership promotes creativity, then shared leadership can be said to be a sparking buff that brought creativity back. Nevertheless, we were very surprised to find that there was no research focused on the possible relationship between ethical leadership and shared leadership, even though the research topic on the relationship between vertical leadership and shared leadership is an essential direction of shared leadership research (Ensley et al., 2006; W. He et al., 2020; Hoch, 2013; Hsu, Li, & Sun, 2017; Pearce, 2004; Pearce & Sims Jr, 2002). The two ethics-related leadership theories mentioned before, transformational leadership and authentic leadership, have been confirmed by research that it has a positive effect on stimulating shared leadership, so there is the limitation that no evidence by offered for ethical leadership, which also inspired the attention in this article to the relationship between ethical leadership and shared leadership.

Drawing on the IPO model of the team and following the suggestion by Banks et al. (2021), this study arranged ethical leadership as the individual and team input, motivated shared leadership as the team process further result in individual and team outcomes.

3. Research Purpose

This study designed to explore the multilevel moderated mediation model included pathways that enable a more detailed analysis of the mechanisms that link ethical leadership and individual and team creativity by considering the moderate effect of LMXD and mediating role of shared leadership. This study proposed to broaden our knowledge of the multilevel antecedents and creativity through leadership influence. And designed to fulfill the shortage of research bodies on the relationship between vertical and shared leadership. Moreover, this study was also designed to fulfill the shortage of research bodies on the relationship between vertical and shared leadership. Moreover, this study also answered the question of how and when shared leadership occurs in the team context.

This study's central proposition is that practicing and utilizing ethical leadership is instrumental to creating a positive relationship with team members and acting out advantageously internal work environments that catalyze shared leadership. Under this premise, this study fulfilled the blank of the research area of the relationship between vertical and shared leadership. This study takes the following objectives and exemplary contributions and strives for them by organizing ethical leadership as a core antecedent of shared leadership and exploring these factors and their relationships.

First of all, it is not surprising that leadership will facilitate the emergence of creativity. This study affirmed the positive impact of ethical leadership on creativity through the mediating role of shared leadership at the individual and team levels.

Second, this study focused on ethical leadership and shared leadership, not employing the usual angle that distinguishes the two forms of leadership but exploring the cause and effect. At the same time, by proposing an additional possibility to explain the importance of ethical leadership in the team, this research provides a creative perspective for exploring the emergence of shared leadership and enriches the current amount of research on ethical leadership.

Third, by highlighting the concept of ethical leadership, this study contributes to expanding our understanding of shared leadership's antecedences. This study fully agreed that the generation of shared leadership is necessary but not easy. Following the research topic involved the vertical and shared leadership interaction, this study introduces the moderating role of LMXD and fulfills the mechanism of vertical leadership and shared leadership relationship.

Fourth, to elaborate the leadership process toward multiple forms of individual and team-level creativity, this study analyzed the multilevel moderated mediation process through which ethical leadership affects creativity. This study identified shared leadership as a mechanism for explaining the relationship between ethical leadership and the team creative process.

Fifth, although leader-member exchange (LMX) has achieved fruitful research outcomes in the field of leadership, as far as known, few studies have tested the role of LMXD in a multilevel model of leadership effectiveness. This study explored allocation preferences theory to explain the sequence LMXD moderating effect. Specifically, this

is one of the first studies introducing LMXD as a diminished effect approach between vertical leadership and shared leadership. It is calling for more research on shared leadership under LMX theory.

4. Research Questions

Throughout the entire research process, this study attempts to figure out:

1) How and when ethical leadership affects creativity at the individual and team level?

2) Does ethical leadership stimulate shared leadership at the individual and team levels?

3) Does shared leadership affect creativity, and what is the mediating role of shared leadership at different levels of creativity?

4) Does LMXD negatively moderate the relationship between ethical leadership and shared leadership, and what the moderated mediation effect through ethical leadership on creativity?

5. Outline of Dissertation

Chapter 1 outlines the introduction of this dissertation, reviews the past research trends, points out the problems and research gaps in the existing literature, identifies the research questions, and formulates this dissertation's purposes and designs. Based on this discussion, the rest of the study is organized as follows:

In chapter 2, the core contents on ethical leadership, shared leadership, leader-member exchange differentiation (LMXD), and multilevel creativity are examined. This chapter discusses how ethical leadership promotes shared leadership and fosters the connections between team members that support individual and team creativity. Besides, it illustrates how shared leadership essential to creativity. What is more important is discussing the relationship between vertical and shared leadership and reviewing the interaction role of LMXD. Chapter 3, based on current literature, introduces the conceptual framework, and explores the variables' relationships, and establishes hypotheses. In chapter 4, the data collection process, measurement of the variables, and analysis methods are explained. This chapter deals with the research design used to test the proposed hypotheses, the research methodology is based on a survey approach, and this chapter provides information about the targeted sample, data collection procedure, measurements, and proposed analytical methods. Chapter 5 presents the results of the analyses and a general summarization. Finally, chapter 6 summarizes the study's outcomes, discusses this study's theoretical and practical implications, states the limitations, and offers suggestions for future research.

CHAPTER 2: Literature Review

1. Ethical Leadership

In recent years, there has been a constant debate on the effectiveness and necessity of ethical leadership. We hear some voices argued that ethical leadership is

redundant or ethical leader insufficient for organization management. Some studies under the norm conformity pathway propose that ethical leadership may be detrimental for creativity because it makes team members prefer conforming to the status quo. However, from the great rating of the exposure of ethical scandals to the reputation of corporate social responsibility, it is increasingly hard to argue that leaders could not be under public scrutiny. Ethical leadership is clearly very fundamental and crucial to an organization. Leaders must reach the highest level of morality because they may have to face the most difficult dilemma and make the most helpless but correct decisions. There is no perfect leader, but it does not mean that it is inevitable to violate morality, ethics, and leadership linked to each other. Ethical leadership remains underdeveloped and fragmented (Brown & Treviño, 2006).

1.1 Theoretical Bases of Ethical Leadership

As one of corporate decision-makers, leaders' respect for ethics directly correlates with the behavior of social responsibility in enterprises, the importance of ethics in leadership is becoming increasingly prominent and has a magnifying effect. In other words, leaders' moral success or failure, rather than non-leaders, is more pronounced in-depth and breadth, so research into the moral norms of leaders is viewed as the basis for understanding leadership. For decades, researchers have a consensus that ethical behavior is essential to leadership. Scholars have defined ethical leadership

in normative terms. Most of this research focuses on moral principles and suggests leaders "should" do (Brown & Treviño, 2006).

Ethics is a philosophical term originating from the Greek word "ethos." In Greek, the word "ethos" means a place of residence, a place where a group of people lives together. Later, the expanded meaning including the character, temperament, and customs of the group. Searching "ethics" in *Encyclopedia Britannica*, it is concerned with describing and prescribing moral requirements and behaviors, which suggests that there are acceptable and unacceptable ways of behaving that serve as a function of philosophical principles (Minkes, Small, & Chatterjee, 1999). Ethical behavior is defined as behavior that is morally accepted as "good" and "right" in a given situation, as opposed to "bad" or "wrong" (Sims, 1992). Ethics is the code of values and moral principles that guide individual or group behavior concerning right or wrong. Ethical behavior is both legally and morally acceptable to the larger community (Treviño, 1992). Ethical dilemmas though, are present in uncertain situations, in which different interests, values, beliefs pertaining to multiple stakeholders are in conflict.

The root of ethical leadership starts with exploring the traits of "good" leaders. Under the view of Ciulla (2003), comparing with asking what the definition of leadership, the ultimate point of studying leadership is to give the answer to what is a good leader. In reality, people want leaders to be good, both effective and ethical. Ever since Ciulla's argument about ethics at the heart of leadership, ethical leadership has begun to present a better understanding of the nature of leadership.

Researchers generally agree that ethical leaders are fair, honest, and principled individuals who use various rewards, punishments, and communication mechanisms to influence their followers' ethical behavior (Brown et al., 2005). In addition, ethical leaders have clear personal moral standards when facing moral pressure. They think about long-term consequences, and they are humble, concerned for the great good, take responsibility, and show respect for each individual (Mihelic, Lipicnik, & Tekavcic, 2010).

Many critical issues and questions have emerged in the development of ethical leadership theory. For example, the similarity to other leadership theories, namely, transformational leadership, spiritual leadership, and authentic leadership theory, partially overlap with ethical leadership. What is the distinctive about ethical leadership in contrast to other areas? Studies systematically develop the theories of transformational leadership, spiritual leadership, and authentic leadership (Brown & Treviño, 2006). These four leadership categories, including ethical leadership, are linked to altruistic motives, sincere sympathy, and concern for others, all of them are emphasized the importance of ethics for effective leadership. Still, each leadership style has its own focus. Employees are more willing to follow such leaders since they identify with their vision and values. However, the significant difference between ethical leadership and the other three types of leadership is that, apart from ethical leadership, none of the other three leadership theories focuses on the impact of leaders on employees' moral or ethical behavior in working organizational contexts. In addition,

the other three concepts of leadership included qualities that are not part of ethical leadership. In short, ethical leadership is significantly different from the other three types of leadership even though the connection exists, such as concern about the moral qualities of leaders. For example, ethical leadership is different from transformational leadership, especially in terms of influencing processes. In other words, ethical leadership includes an important transactional and interaction component, through which ethical leaders focus on communicating and encouraging ethical behavior rather than merely acting as role models (Brown et al., 2005).

Another impressive controversy is whether it is possible to be a bad person but a good leader. Some scholars offered answered why a moral character does not have to be a moral manager. They viewed ethical leaders' reputation rests on the leader's perception as an honest person and as a moral manage (Treviño, 1992; Treviño, Hartman, & Brown, 2000). Leaders who talk the ethical talk (they are moral managers) but don't walk the walk (they are not moral persons) are hypocritical leaders. Moral leadership requires a strong moral foundation. Ethically neutral leadership is the most controversial with executives. It applies to executives who fall into what employees perceive to be an ethically neutral zone.

As mentioned earlier, the combination of a strong moral person and a strong moral manager earns a reputation for ethical leadership. In other words, to be regarded as an ethical leader, it is insufficient to be a solo moral person or a moral manager. Executive ethical leadership is much more than traits. It requires great care to create

and sustain an ethical culture that sends a consistent message, shaping ethical climate and ethical standards, as powerfully as a warning of the bottom line.

1.2 Concept of Ethical Leadership

According to Brown et al. (2005), ethical leadership can be defined as "the demonstration of normatively appropriate conduct through personal actions and interpersonal relationships, and the promotion of such conduct to followers through two-way communication, reinforcement, and decision-making" (p. 120). Mihelic et al. (2010) summarized four proposals from the above definition that 1) ethical leaders role as a model, the behavior of ethical leaders would be accepted as appropriate by followers; 2) ethical leaders proactive to communicate to followers and prove their actions; 3) ethical leaders set ethical standards, therefore, they and followers could continually behave according to ethics; and 4) ethical leaders incorporate ethical dimensions in the decision-making process, consider the ethical consequences of their decisions, and above all try to make fair choices. To sum up, ethical leadership is associated with a leader's traits and ethical behavior and is linked to value-based management.

Another contribution of Brown et al.'s (2005) research was to examine the empirical impact of ethical leadership. They developed the 10-item Ethical Leadership Scale (ELS). This instrument proved again that ethical leadership positively related to but distinguished from the ethical dimension of other leadership styles. Brown and Treviño (2006) presented a conceptual, ethical leadership model, which greatly

benefited the study of ethical leadership. In their model, the antecedents of ethical leadership are mainly divided into two categories: situational influences and individual characteristics. Regarding ethical leadership outcomes, they proposed that ethical leadership positively affects follower ethical decision-making, prosocial behavior, follower satisfaction, motivation, commitment, and negative to counterproductive behavior.

1.3 Research on Ethical Leadership

Social learning theory (Bandura & McClelland, 1977) and social exchange theory (Blau, 1964) are two main theories that scholars utilized to explain the beneficial effects of follower perceptions of ethical leadership on follower work outcomes. Under social learning theory, individuals learn the norms of appropriate conduct through observing ethical leaders. They can learn what behavior is expected, rewarded, and punished via their role modeling. The ethical leader usually plays a good model role who can motive subordinates to follow them in work contexts. In the perspective of social exchange theory, when subordinates perceive a trustworthy leader, they will be more willing to develop the exchange. Based on ethical leadership theory, ethical leaders inspire a significant amount of trust. In addition to this, Social identity theory (Ashforth & Mael, 1989) is another intermediate theory that scholars (Walumbwa, Luthans, Avey, & Oke, 2011) believe might further help explain the relationship between ethical leadership and performance.

Bedi, Alpaslan, and Green (2016) contributed a meta-analysis review of ethical leadership. They examined the most frequently studies consequences of ethical leadership and summarized them into two categories. One is follower consequences of ELS, including perceptions of ethical context, self-efficacy, ethical behavior and work-related outcomes, effort, voice, psychological well-being; another category is leader associated attitudes, including attitudes associated with the leader and leader-member exchange.

Another integrative study for ethical leadership contributed by Ko, Ma, Bartnik, Haney, and Kang (2018) which reviewed empirical finding from the ethical leadership literature building a framework. The authors listed 1) follower ethical behaviors, 2) follower outcomes related to job and organization, 3) follower life and family satisfaction, 4) leader outcomes, and 5) group and firm-level outcomes of ethical leadership.

Most recently, Banks, Fischer, Gooty, and Stock (2021) addressed the critical limitation of ethical leadership literature and the nomological network of ethical leadership behavior at the individual, dyad, and group levels. They recommended that the agenda for the empirical study of ethical leadership should emphasizing methodology such as employee observational studies, measure behavior objectively, experimentation, level analysis, or account for time scale.

To add knowledge and fully grasp the trend of ethical leadership learning, the scholars found that the scholars shed light on ethical leadership in team environments.

Specifically, they try to answer how ethical leadership can change the organizational culture or utilize ethical leadership for team development interventions. Furthermore, extend the contributions of ethical leadership to multi-level outcomes. Scholars not only focused on follower satisfaction, motivation, and commitment, the scholars became more interested in testing follower proactive behavior; pointed out voice, knowledge sharing, and followers' identity and emotion were explored by scholars for the outcomes of ethical leadership. Not surprisingly, the outline mechanism increasingly complex so do the expressions.

1.4 Ethical Leadership & Different Leadership Styles

With the concern about how ethical leadership relates to other leadership styles, this study summarized the previous studies which focus on ethical leadership and other leadership style relationship, surprising found out that there are few studies explored the interaction between ethical leadership and other leadership styles, the main research topic around two different leadership styles is comparing the distinguishes and similarities.

Bedi et al. (2016) extended our understanding of the relationship between ethical leadership and transformational and transactional leadership. Results proved ethical leadership is negatively related to abusive supervision, positive related to transformational leadership, and each sub-dimensions of transformational leadership. They also presented that ethical leadership is positively associated with the sub-dimensions of transactional leadership, namely contingent reward. However, no

significance to management-by-exception-active. For management-by-exception-passive and laissez-faire, the test showed ethical leadership negative to these two sub-dimensions of transactional leadership.

Through the summary of <Table 1>, representative articles and findings on the relationship between moral leadership and other types of leadership in empirical research can be summarized as rare. But we can still find the interaction or complementarity relationship with ethical leadership and other leadership styles.

<Table 1> Ethical Leadership and Other Leadership Styles

Leadership	Model	Finding	Source
Transformational leadership; Transactional leadership	Causation	Supported (+) Partial supported	Bedi et al., (2015)
Passive leadership	Interaction	Passive leadership: moderated on the indirect relationship between ethical leadership and follower burnout. Role clarity: mediated on both relationship.	Vullinghs, De Hoogh, Den Hartog, & Boon (2018)
Spiritual leadership	Substitution	Alternative explanation of ethical leadership.	Wang, Guo, Ni, Shang, & Tang, (2019)
Emotional leadership	Substitution	Both ethical and emotional leaderships enhance employee motivation.	Ouakouak, M. L., Zaitouni, M. G., & Arya, B. (2020)

Source: author sorted out based on related previous studies.

2. Shared Leadership

Northouse (2021) expressed that anyone can exhibit leadership because positions do not define it. Leadership revolves around work and how people are

mobilized to do work. Even though the multitude of ways to define leadership offered by scholars through different perspectives, also 1900s the history of leadership definition evolutions, the central of leadership is closely related a phenomenon that occurs in groups that a process and involves influence to achieve a common goal. Words to live by "Leadership without easy answers," the scholars never stop to turn their eyes insides and outsides of leadership theory; shared leadership seems fresh but not new to us.

2.1 Emergence and Development of Shared Leadership Theory

In the area of leadership theory and practice, most researchers have largely dug into vertical leadership, emphasizing the behavior of one appointed leader. In other words, in the predominant view, leadership is an influence process by which one capable leader inspires the followers in inspirational ways. But can a single even highly gifted individual be the "right" leader all the time? In fact, it was out of the question as for any single human to equip the adequate knowledge and abilities required to lead work and subordinates (Pearce & Conger, 2003), especially, considering the rapidly changing society today.

As organizational structures become more fluid and borderless, units and work teams are popular, work tasks are becoming increasingly complex, leading to a rapidly growing body of research on team-based knowledge work, involving various intellectual capital. Neither organizations nor researchers can afford to rely on simple notions of the "great man" approach, vertical and traditional command-and-control

leadership (Pearce, 2007), therefore, obviously, the necessity of the research of horizontal, shared, and participatory leadership is growing (Houghton, Neck, & Manz, 2003).

Even though there is no doubt about the influence of sharing, it has recently gained a standing, especially in the context of measureless information and limitless connections, driving an explosion of theories. One of the most striking of those theories is shared leadership, which is characterized as leadership no longer just determined by positions but rather by employees' capabilities and the team's needs (Pearce & Sims, 2000). Because it combines the best leadership abilities of several people, shared leadership is being tested as a possible way to meet the challenging needs of the business (Fitzsimons, James, & Denyer, 2011).

More than 30 years ago, scholars began to argue that non-leader power, similar to substitute for leadership, could shed light on a right desirable objective for organizations (Manz & Sims Jr, 1980). It is desirable to know how the shared leadership emergence and developed. Some historical points can be marked to explain the process. <Table 2> figures out background theories and shared leadership concepts, summarized in detail by Pearce and Conger (2003). This study introduced the following three approaches, which are most recognized as essential contributions during the emergence and development of shared leadership. Besides that, this study suggests to *Least Preferred Coworker (LPC) Theory* (Fiedler & Barron, 1967), *Situational Leaders Theory* (Hersey, Blanchard, & Natemeyer, 1979), and A*daptive Leadership Theory*

(Heifetz & Heifetz, 1994) as addendums to explain the evolution of shared leadership theory.

It acknowledged that Follet's law of the situation is the pioneer of the shared leadership theory. This source suggests that one should let logic dictate to whom one should look for guidance based on individuals' knowledge of the situation at hand. According to Pearce and Sims (2000), they believe Follet's theory is a clearly related concept in that situation, not the individual, that provides the basis for leadership. Then, the substitutes for leadership (Kerr & Jermier, 1978) literature also provides a possible framework for understanding the concept of shared leadership. The theory claims that subordinates, tasks/jobs, and organizational factors can provide guidance and positive effects for employees, influencing leadership effectiveness. Another concept related to shared leadership development is emergent leadership. Emergent leadership mainly refers to the phenomenon of selecting leaders from non-leader or leaderless groups. Similarly, emergent leadership is taking charge in a situation without a formal hierarchy in place.

This study fully committed to the previous review (Pearce & Conger, 2003; Pearce & Sims, 2000) and recommended adding the following theories to note the process. First, Fiedler and Barron (1967) least preferred coworker (LPC) theory. This theory tries to break the idea that there is only one single effective leadership style. Fiedler presented a new phase that effective leadership behavior has three key impact factors: relationships, power, and task structure. LPC score for leaders by asking them

first to think of a person they worked with that they would like least to work with again. A high LPC leader is usually a relationship-oriented leader, focusing more on personal and connections. On the contrary, leaders with low LPC scores are task oriented. Fiedler suggested leaders identify their styles and situation, then determined the most effective leadership style, specifically, low LPC or high LPC.

Second, Hersey et al. (1979) notorious for their model, scholars believe that their model and theory can be seen as a derivation of shared leadership. They suggested successful leadership should be flexible that both task-relevant and relationship-relevant, under their situational leader model, managers must choose the leadership style as it relates to the maturity of followers. Besides, Hersey and Blanchard offered four types of leadership styles, namely, delegating style, participating style, selling style, and telling style.

Third, Heifetz and his colleagues (Heifetz & Heifetz, 1994) developed a framework for adaptive leadership, which focuses on how people change and adapt to new environments. It originates from struggles or tensions between people due to conflicting needs, ideas, and preferences. It is not conceptualized as a person or a specific behavior, but as a dynamic process (Uhl-Bien, Marion, & McKelvey, 2007).

\<Table 2\> Background Theories and Concepts of Shared Leadership

Theory	Key issues	Representative author
Law of the situation	Let the situation, not the individual, determine the "order".	Follett, (1924)
Human relations and social systems perspective	One should pay attention to the social and psychological needs of employee.	Mayo, (1933); Turner, (1933); Barnard, (1983)

Role differentiation in groups	Members of groups typically assume different types of roles.	Benne & Sheats, (1948)
Co-leadership	Concerns the division of the leadership role between two people---primarily research examines mentor and protégé relationship.	Solomon, Loeffer, & Frank (1953); Henman, & Bennis, (1998)
Social exchange theory	People exchange punishments and rewards in their social interactions.	Festinger, (1954) Homans, (1958)
Management by objectives and participative goal setting	Subordinates and superiors jointly set performance expectations.	Drucker, (1954) Erez & Arad, (1986); Locke & Latham, (1990)
Emergent leadership	Leaders can "emerge" from leaderless group.	Hollander, (1961)
Least preferred coworker (LPC) theory	Leaders prioritize between task-focus and people-focus. Relationships, power and task structure are the three key factors that drive effective styles.	Fiedler, (1964; 1967)
Participative decision making	Under certain circumstances, it is advisable to elicit more involvement by subordinates in the decision-making process.	Vroom & Yetton, (1973)
Vertical dyad linage/Leader member exchange	Examines the process between leaders and followers and the creation of in-groups and out-groups.	Graen, (1976)
Situational leaders' theory	There is no single leadership style that is better than another. Instead of focusing on workplace factors, the model suggests leaders adjust their styles to the followers and their abilities.	Hersey & Blanchard, (1977)
Substitutes for leadership	Situation characteristics (e.g., highly routinized work) diminish the need for leadership.	Kerr & Jermier, (1978)
Self-leadership	Employees, given certain conditions, are capable of leading themselves.	Manz & Sims, (1980)
Self-managing work teams	Team members can take on roles that were formerly reserved for managers.	Manz & Sims, (1987, 1993)
Followership	Examines the characteristics of good followers.	Kelly, (1988)
Empowerment	Examines power sharing with subordinates.	Conger & Kanungo, (1988)
Adaptive leadership	The practice of mobilizing people to tackle tough challenges and thrive.	Heifetz, (1994); Heifetz et al. (2009)

		Klimoski & Mohammed, (1994); Cannon-Bowers & Salas, (1993); Ensley & Pearce, (2001)
Shared cognition	Examines the extent to which team members hold similar mental. models about key internal and external environment issues.	Klimoski & Mohammed, (1994); Cannon-Bowers & Salas, (1993); Ensley & Pearce, (2001)
Mutual leadership	Leadership can come from peers.	Bowers & Seashore, (1996)
Connective leadership	Examines how well leaders are able to make connections to others both inside and outside the team.	Lipman-Blumen, (1996)

Source: Pearce & Sims, (2000); Pearce & Conger, (2003); Author updating based on related previous studies.

2.2 Concept of Shared Leadership

Although disputes exist in offered definitions of shared leadership have been provided, they all agree shared leadership influences and stems from team members. Therefore, it might improve the team integration and effectiveness since the team shared advantage of leadership abilities on team members who are multifunctional and highly skilled (Burke, Fiore, & Salas, 2003). In addition to the best utilized human resource, shared leadership entails another superior: high involvement and creativity (Pearce & Manz, 2005). For better understanding, this study abstracted the different definitions of shared leadership offered by scholars in previous studies in <Table 3>.

<Table 3> Definitions of Shared Leadership

Scholars	Date	Definition
Jackson	2000	A decentralized organizational structure; A balance of staff autonomy, managerial guidance, collaborative decision making and individual accountability; An environment that ensures excellence and dignity of the individual; A shared vision within the organization (p. 168).
Pearce & Sims	2002	Leadership that emanates from the members of teams, and distributed influence from within the team (p. 172).
Pearce & Conger	2003	A dynamic, interactive influence process among individuals in groups for which the objective is to lead one another to the achievement of group or organizational goals or both. This influence process often involves peer, or lateral, influence and at other times involves upward or downward hierarchical influence (p. 1).

Fletcher & Kaufer	2003	Shared leadership is leadership as learning; Distributed and interdependent; embedded in social interaction (p.22).
Cox, Pearce, & Perry	2003	The condition in which teams collectively exert influence (p. 53).
Seers, Keller, & Wilkinson	2003	The extent to which more than one individual can effectively operate in distinctively influential role within the same interdependent role system (p. 79).
Burke, Fiore, & Salas	2003	A leadership process in which the leadership function is dynamically transferred within the team. The transference of the leadership function among team members in order to take advantage of member strengths (e.g., knowledge, skills, attitudes, perspectives, contacts and time available) as dictated by either environmental demands or developmental stage of the team (p. 104-105).
Houghton, Neck, & Manz	2003	A process through which individual team members share in performing the behaviors and roles of a traditional hierarchical leader (p. 124).
Avolio, Sivasubramaniam, Murry, Jun, & Garger	2003	How all members of a team collectively influence each other toward accomplishing its "goal" (p. 145).
Siebert, Sparrowe, & Liden	2003	How influence is not solely the prerogative of formal leaders but may be shared by members of the group or teams. Shared leadership thus bridges the distance between theories that focus on the effects of formal leaders on group performance and those that focus wholly on self-managing teams (p. 173-174).
Mayo, Meindel, & Pastor	2003	An approach that considers the role of mutual influence among team members as another source of leadership for the group (p. 193).
Hooker & Csikszentmihalyi	2003	A process of shared influence between and among individuals that can emerge in a group context as an alternate social source of leadership (p. 218).
Shamir & Lapidot	2003	A reciprocal influence processes among multiple parties (e.g., designated leader and his subordinates) in a systems contest (p. 236).
Locke	2003	A dynamic exchange of lateral influence among peers rather than vertical downward influence by an appointed leader (p. 271).
Pearce	2004	Simultaneous, ongoing, mutual influence process within a team that is characterized by "serial emergence" of official as well as unofficial leaders (p. 8).
O'Connor & Quinn	2004	Property of the whole system, as opposed to solely the property of individuals, effectiveness in leadership becomes more a product of those connections or relationships among the parts than the result of any one part of that system (such as the leadership) (p. 423).
Pearce & Manz	2005	Shared leadership occurs when all members of a team are fully engaged in the leadership of the team: shared leadership entails a simultaneous, ongoing, mutual influence process within a

		team, that involves the serial emergence of official as well as unofficial leaders (p. 133-134).
Wood	2005	The state or quality of mutual influence in which team members disperse the leadership role throughout the group, participate in the decision-making process, fulfill tasks traditionally reserved for a hierarchical leader, and, when appropriate, offer guidance to others to achieve group goals (p. 64).
Sanders	2006	A dynamic, collaborative, and emergent process of group interaction characterized by high levels of peer influence and the active display of collective leadership by the group as a whole.
Mehra, Smith, Dixon, & Robertson	2006	Shared distributed phenomenon in which several (formally appointed and/or emergent) leaders exist. Team has one or more leaders (p. 233).
Ensley, Hmieleski, & Pearce	2006	Team process through which leadership is carried out by the team as a whole rather than solely by a single designated individual (p.220).
Hiller, Day, & Vance	2006	The epicenter of shared leadership is the interaction of team members to lead the team by sharing in leadership responsibilities. Not a characteristic of a person, but involves the relational process of an entire team, group, or organization. As a process, shared leadership presumes that leadership can be embedded in the dynamics of a social system, and need not be constrained to acts of a heroic or charismatic individual (p. 388).
Carson, Telsuk, & Marrone	2007	An emergent team property that results from the distribution of leadership influence across multiple team members (p. 1218).
Small & Rentsch	2010	An emergent team process defined by the distribution of leadership functions among multiple team members (p. 203).
Hoch, Pearce, & Welzel	2010	A collective social influence process shared by team members and aimed toward the achievement of one or more common goals (p.105).
Goldsmith	2010	Maximizing all of the human resources in an organization by empowering individuals and giving them an opportunity to take leadership positions in their areas of expertise.
Zhou	2012	The distribution of leadership influence across multiple team members (p.671).
Wang, Waldman, & Zhang	2014	An emergent team property of mutual influence and shared responsibility among team members, whereby they lead each other toward goal achievement (p.182).
Nicolaides	2014	A set of interactive influence processes in which team leadership functions are voluntarily shared among internal team members in the pursuit of team goals (p. 924).
Hoch	2014	A situation where multiple team members engage in leadership and characterized by collaborative decision making and sharing responsibility for outcomes (p. 545).
Lee, Lee, & Seo	2015	An emergent team property that results from the distribution of leadership influences across multiple team members (p. 48).
D'Innocenzo, Mathieu, & Kukenberger	2016	An emergent and dynamic team property whereby leadership roles and influence are distributed among team members (p.5).
Meuser, Gardner, Dinh, Hu, Liden, & Lord	2016	A form of leadership that is distributed and shared among multiple participating individuals, rather than being produced by a single individual (p.1390).

Chiu, Owens, & Tesluk	2016	A group-level phenomenon generated from reciprocal reliance and shared influence among team members so as to achieve team goals (p.1705).
Lord, Day, Zaccaro, Avolio, & Eagly	2017	Shared leadership can be viewed in terms of how different individuals enact leader and follower roles at different points in time (p.444).

Source: author updated based on related previous studies.

To summarize, shared leadership definitions often include the term team, coupled with the concept of a process, property, or phenomenon. Shared leadership is a relational, collaborative leadership process or phenomenon involving teams or groups that mutually influence one another and collectively share duties and responsibilities otherwise relegated to a single, central leader (Kocolowski, 2010). Zhu et al. (2018) mentioned there are three key commonalities across these definitions, and one is related to the basic of leadership definition, shared leadership is also about lateral influence among peers; second is shared leadership emergence in the team; third is leadership roles and influence are dispersed across team members.

Widest accepted definition from Pearce and Conger (2003), "A dynamic, interactive influence process among individuals in groups for which the objective is to lead one another to the achievement of group or organizational goals or both" (p. 1). In this study, the author strongly willing to refer to Pearce and Manz (2005) description:

"Shared leadership occurs when all members of a team are fully engaged in leadership of team: Shared leadership entails a simultaneous, ongoing, mutual influence process with a team, that involves the serial emergence of official as well as unofficial leaders." (p.134)

2.3 Vertical and Shared Leadership

Leadership is a complex process. It is not just a simple top-down flow, neither a bottom-up flow. Pearce (2004) clearly stated that we truly question whether the traditional vertical leadership model is still appropriate, but that does not mean this is not the age of vertical leadership anymore. The issue is not vertical leadership or shared leadership. Instead, the issue is how to use both vertical leadership and shared leadership to utilize the capabilities of knowledge workers. Shared leadership is an idealization, and it is like an aircraft that need pilots who can safely drive; vertical leadership is there. It is confirmed out speculate that the negative effect of vertical leadership is only identifiable beyond some threshold level of each type of leadership and that every kind of leadership is necessary.

Pearce and Manz (2005) suggested two critical issues for the nascent developer of shared leadership to consider. First, the vertical leader is responsible for the team's design, which is vital if shared leadership is to flourish. Second, the vertical leader has the primary responsibility for managing the team boundaries. Furthermore, Manz, Skaggs, Pearce, and Wassenaar (2015) supplied the specific roles for vertical leaders in the ongoing development of shared leadership, specifically, support and maintenance.

This study summarized the study focus on vertical and shared leadership in the last twenty years (see <Table 4>). What a pleasant finding is the research on vertical and shared leadership present the managers and scholars a designable solution for effective.

<p align="center">**<Table 4> Vertical and Shared Leadership**</p>

Leadership	Finding	Model	Source
Vertical leadership -Aversive -Directive -Transactional -Transformational -Empowering	1)Shared leadership explains more variance than vertical leadership. 2)Vertical and shared leadership are not mutually exclusive.	Synergistic joint vertical (each type) and shared leadership	Pearce & Sims, (2002)
Directive leadership; Transactional leadership; Transformational leadership; Empowering leadership	1)Emanate from the vertical leader or be shared and distributed among members. 2)Mutually, combined effect.	/	Pearce, (2004)
Directive leadership; Transformational leadership; Transactional leadership; Empowering leadership	1)Complementary and convergence with SL. 2)The relative importance of vertical VS SL is dependent on the stage in the development or evolution of the organization.	Dimensions both in vertical and SL	Ensley, Hmieleski, & Pearce, (2006)
Empowering leadership	Proposition (+)	Causation - Antecedents Of SL	Pearce et al., (2008)
Transformational leadership; Empowering leadership;	Supported (+) Supported (+)	Causation - Antecedents Of SL	Hoch, (2012)
Empowering leadership	Supported (+)	Causation - Antecedents Of SL	Fausing et al., (2013)
Transformational leadership	Supported (+)	Interaction -SL as a mediator	Cho, (2014)
Self-leadership	The combination of shared and self-leadership that promotes balance between personal and collective pursuits offers the greatest potential for foster positive contributing to the sustainability of service.	Synergistic	Manz, Skaggs, Pearce, &Wassenaar, (2015)

Vertical leadership	Leader prototypicality moderates the relationship between vertical and SL.	Interaction	Grille, Schulte, & Kauffeld, (2015)
Transformational leadership	Opposite pattern of TL and SL.	/	Kim, (2016)
Vertical leadership	Effective VL both mitigate and adverse impact of value diversity on SL, and stabilize teamwork when SL is absent.	Interaction	Hsu, Li, & Sun, (2017)
Servant leadership	Supported (+) (Servant leadership moderated the relationship between LMX differentiation (LMXD) and shared leadership).	Interaction	Wang et al., (2017)
Empowering leadership; Servant leadership	Proposition (+) Proposition (+)	Causation - Antecedents Of SL	Kang, (2018)

Source: author sorted out based on related previous studies.

2.4 Existing Research on Shared Leadership

The shared leadership approach to leadership is about helping others to explore and change their values. The voice of shared leadership could encourage people to change and learn new ways of living so that they may do well and grow as self-development. Fitzsimons et al. (2011) claimed shared leadership changes our relationship at work. Kocolowski (2010) indicated that the benefits of shared leadership are noteworthy. One is that leaders can utilize individual strengths, and organizations can benefit from the diversity of thought in decision-making.

Recent years have seen noticeable advancements in the scholarly attention given to shared leadership. Organizational studies investigating shared leadership expose the complexity of issues through both quantitative or qualitative research focus on 1) meta-

analysis to develop the shared leadership framework of antecedents, outcomes, mediators, and moderators (D'Innocenzo, Mathieu, & Kukenberger, 2016; Zhu et al., 2018); 2) shared leadership effectiveness in the team; 3) shared leadership and innovation (Cox, Pearce, & Sims, 2003; Hoch, 2013; Peter, Braun, & Frey, 2015).

Pearce and Sims Jr (2002) exposed a conceptual framework of shared leadership. In detail, they showed shared leadership as a mediating causal variable between three broad categories of antecedent variables: 1) group characteristics; 2) task characteristics; 3) environment characteristics, and three broad categories of group outcome variables: 1) group psyche; 2) group behavior; 3) group effectiveness. The exciting path is that these three broad outcome categories are also depicted as having influences on shared leadership.

D'Innocenzo et al. (2016) used 50 effect sizes from both published and unpublished studies, provided meta-analytic support for the positive relationship between shared leadership and team performance.

Zhu et al. (2018) comprehensively reviewed shared leadership. They presented an integrative framework that depicts extant research on the antecedents, consequences, mediating mechanisms, and boundary conditions of shared leadership. They suggested two categories, including formal team leader factors and team characteristics, are antecedents of shared leadership. Consequently, they reviewed proximal outcomes (how shared leadership shapes team process and contributes to team successes), distal outcomes (how shared leadership increases team performance), and boundary

conditions on the effects of shared leadership.

Cox et al. (2003) contributed a model of shared leadership and distributed influence in the innovation process, specifically, in the new product development team context. In their conceptual model, shared leadership behaviors by the vertical leader are positively related to team responses and team effectiveness. Besides, vertical leadership and team characteristics are positively associated with developing and displaying shared leadership in the team environment.

Kang and Svensson (2019) explored shared leadership in the sport of development and peace and offered a conceptual framework including vertical leadership, supportive environment, member characteristics and task characteristics as antecedences, organizational performance, knowledge sharing and power relations, organizational creativity, and innovation, increased ethical behavior, and enhanced employee experiences as outcomes.

2.5 The Research of Shared Leadership in Korea

For a better review, this study based on the RISS database draws out the research map (see <Figure 1> in p. 40) of academic papers focus on shared leadership in recent years. It is not surprising to find that Korea, as a developed country, the team working environment of Korean organizations is fertile soil for empirical or practical shared leadership.

Based on mapping the meta-model of shared leadership, this studies summarized the research on Korea sample's characteristics and directions as follows:

1) no study gave their own definition; 2) all empirical studies employed a quantitative research approach; 3) the most of study focus on shared leadership in team (e.g., Yoo, 2016), 4) shared leadership is also positive related to individual outcomes; 5) researchers sill attach to the importance to exploring and improving the shared leadership mechanism, 6) the research not only limited in employees, teams and inner organizations, but also link to outside, namely, partners, customers; 7) fewer studies focus on vertical and shared leadership relationship. Specifically, Cho (2014) found shared leadership mediating the relationship between transformational leadership and team outcomes, transformational leadership also be proved positive related to shared leadership; Kim (2016) offered a study does not only focus on the relationship, but the result interestingly showed that opposite pattern of transformational leadership and shared leadership to team performance. In that study, shared leadership significant influenced team potency (b=.65, p<.001), interpersonal relationship (b=.13 p<.001), team effectiveness (b=.367, p<.001), but transformational leadership presented differently (team potency, b=.07, ns; interpersonal relationship, b=.13, ns, team effectiveness, b=.356, p<.001), the author also tested team performance's moderating between vertical/shared leadership and team effectiveness; 8) it's worth pointing out the advantage of Korea sample is giving a clue that shared leadership is positively associated with financing performance (Park, 2019). This achievement is different

from others because it shed light on shared leadership and organizational business performance.

<Figure 1> The Conceptual Model of Review Shared Leadership Studies

*Team Environment/Climate *Team Proactivity *Organizational Culture *Group Cohesiveness *Vertical Leadership -Transformational Leadership *Task Characteristics -Task cohesion -Task ambiguity *Job Characteristics *Individual Ability -self-directed learning ability Leader Humility	

*Team Characteristics *Individual Reason *Task Independence *Job Variety *Value Congruence *Self-efficacy *Resilience

SL

*Team PsyCap *Individual PsyCap *Task/Job *Attitude *Relationship *Individual Behavior

Individual Level *Well-being *Satisfaction *Engagement *Knowledge Sharing *Extra-role Behavior *Counterproductive Work Behavior (-) *Learning *Innovative Behavior *Change-oriented OCB *Job crating *Cooperative governance performance *Communication *Customer Orientation **Team level** *Well-being *Engagement *Satisfaction *Effectiveness *Team Performance *Team Efficacy *Collective

Source: author sorted out based on related previous studies.

3. Leader-member Exchange Differentiation (LMXD) Theory

3.1 The Development of LMX Literature

Leader-member exchange (LMX) theory as a relationship-based approach to leadership research has evolved into one of the most pragmatic and interesting framings for study. Since almost five decades ago, Graen and colleagues have fostered and

irrigated this approach. The current LMX theory is different from the early vertical dyad linkage (VDL) work (Graen & Uhl-Bien, 1995).

As Graen and Uhl-Bien (1995) recognized, the VDL can be seen as the first stage of the development of LMX theory, and there is a total of four-stage divided into the whole process of LMX theory development. In this stage, researchers found that leaders develop differentiated relationships in work units, contrary to the average leadership style.

In the second stage of the development of LMX, the research sprang up and concentrated on investigating characteristics of LMX relationships and consequences when LMX implicate. Graen and Uhl-Bien (1995) summarized the related research in detail. They found that the positive relationship between leaders and followers will result in high-quality social exchange.

In the third stage, the key topic is team building. Based on research contributions in the previous stage, the scholars have involved mobbing beyond "in/out-groups" to focus on the description of effective leadership building. The major shift is to think about leadership as a partnership among dyadic members. The sparking idea of this stage is that every subordinate should have access to the process of LMX. To achieve this vision, leaders and managers should provide partnerships and make leadership more equitable and visible. Therefore, this stage emerged volume research provided the leadership development model and raised questions and issues that lead to exploring effective leadership.

The last stage is still in its infancy, by enlarged dyadic partnership to group and network level, adopting system level perspective, the fourth stage involves investigating patterns of relationship quality within the leadership structure, taking into consideration the criticality of relationships for task performance, as well as the effects of differentiated relationship on each other and on the entire structure. The research topics are concentrated upon three categories as following: 1) in work team: how high and low quality can coexist in the same work unit, and what kind of process and outcome will be achieved at the team-level; How high quality and low quality survive in the same team, and how these two very different forms of exchange will help the team achieve its performance and affect the team's working attitude; Does the so-called "LMX Gold Ratio" exist? And how does a member of the team think about fairness? 2) intergroup and intragroup: will the quality of relationships developed between team members and colleagues and formal bosses affect the same in other parts of the organization? What are the key web and relationship types necessary to affect which web laws? What can we do for the structure of the work to be done more effectively? 3) inter-organizations: how those relationships affect staff and customers, suppliers, and shareholders? What kind of relationship can be most positive or decisive in inter-organizational interactions? In addition to the above, more research issues are worthy of attention, which shows that LMX theory still has great potential and abundant exploration opportunities.

About the definition of LMX, Schriesheim, Castro, and Cogliser (1999) sorted out the evolution of LMX definition and dimensionality from 1972. In the 1980s, Graen and Scandura (1987) provided what appears to be the first systematic and thorough discussion of many facets of construct, presenting a three-phase model of LMX development: role-taking, role-making, and role-routinization. They defined LMX as:

Leader-member exchange is 1) a system of components and their relationship. 2) involving both members of a dyad 3) involving interdependent patterns of behavior and 4) sharing mutual outcome instrumentalities and 5) producing conceptions of environment, cause maps, and value (Scandura, Graen, & Novak, 1986).

Gerstner and Day (1997) focused on outcomes of LMX and supported a positive relationship between LMX and performance, and the results showed that LMX was consistently related to member job performance, satisfaction, commitment, role conflict and clarity, and turnover intentions. In addition, they found strong support in these studies for the psychometric properties of the LMX 7 Questionnaire. For purposes of research, they highlighted the importance of measuring LMX from the perspective of both the leader and the follower.

Ilies, Nahrgang, and Morgeson (2007) provide a meta-analytic review of the relationship between the quality of LMX and citizenship behavior. The results indicate a moderately strong, positive relationship between LMX and citizenship behavior. LMX predicted individual-targeted behaviors more strongly than it predicted targeted

organizational behaviors. Dulebohn, Bommer, Liden, Brouer, and Ferris (2012) provide a review of LMX's antecedents, moderators, consequences offered a theoretical framework. What's more, the study contributed to the LMX literature by demonstrating that LMX's mediating role. The results showed out follower characteristics (e.g., initial perceptions, personality), leader characteristics (e.g., behaviors, perceptions, personality), interpersonal relationship variables (e.g., similarity, leader affect or liking, follower ingratiation and self-promotion, follower assertiveness, trust) are antecedences of LMX. For consequences of LMX, behavioral outcomes, attitudinal outcomes, perceptual outcomes, and role states were examined. LMX measure used, work setting, participant's location, and culture dimensions presented and tested as contextual variables as potential moderating influences on the relationships between antecedents and LMX. Anand, Hu, Liden, and Vidyarthi (2011) reviewed the development of LMX theory and offered research based on empirical and theoretical papers cited in social sciences indexes since 2002. Based on 130 studies and meta-analytic, more than 70% of these studies examined the antecedents and consequences of LMX, and the interest in studying LMX is still high. They found out there are three ways that studies examining the context of LMX, one is exploring the linkages between LMX and work-group dynamics; Secondly, some scholars have attempted to further our understanding of how LMX works in different societal contexts; Third is understanding the effect of LMX in context of other leadership theories.

3.2 A Multilevel Conceptualization of LMX Processes

LMX is defined as the dyadic exchange relationship between an immediate leader and a subordinate (Graen & Uhl-Bien, 1995). The LMX theory is distinct from other leadership theories since it emphasizes a relationship-based approach to leadership and focuses on the dyadic relationships between a leader and each subordinate based on long- term relationship development. Scholars generally agreed that exchange theory is the groundsill of LMX theory. When the relationship between the leader and the subordinate is closer, the latter will often get better performance evaluation, more promotion opportunities, mutual trust, respect, and care; in return, the subordinate will show more loyalty and respect to the leader, thus improve work efficiency and positive work results (Kim, Liu, & Diefendorff, 2015).

Many scholars have begun investigating a multilevel conceptualization of LMX process, including dyadic level concept, individual within-team-level concepts, and team-level concept. To provide some representative definitions and operationalizations, LMX similarity is a dyadic level concept referring to the similarity between the LMX levels of two coworkers with the same leader which can be defined as individuals' subjective perception of the similarity between their LMX and that of a coworker (Baker & Omilion-Hodges, 2013). An objective conceptualization for individual within -team-level concepts is relative LMX (RLMX), defined as "one's LMX quality relative to the average LMX quality in work group" (Henderson, Liden, Glibkowski, & Chaudhry, 2009). Team-level conceptualization of LMX processes, such as LMX

disparity (Herdman, Yang, & Arthur, 2017), LMX consensus (Schyns, 2006), LMX variability (Hooper & Martin, 2008), and LMXD (Liden, Erdogan, Wayne, & Sparrowe, 2006), represents "the degree of variability in the quality of the exchange relationships between a team supervisor and various team members." (Wang et al., 2010; p. 1091). This variability is referred to as LMXD.

Other researchers have suggested that LMX processes may operate at the group level of theory, as variability in LMX quality within a group creates a group-level context that is meaningful to the experience of both managers and subordinates (Boies & Howell, 2006). Across organizational work groups, within-group LMX relationships may be differentiated to a greater or lesser extent. In groups with a low degree of LMXD, individuals who are relatively closer to their leaders may not experience the same relative advantages that they might if they were in a group with a higher level of LMX variability (Erdogan, Kraimer, & Liden, 2002).

Some researchers think it reasonable that LMX processes should operate simultaneously at multiple theoretical levels to influence perceptions and behaviors in the employment relationship. Specifically, LMX may operate 1) at the individual level, by an assessment of and obligation to reciprocate the rewarding behaviors of one's exchange partner (Blau, 1964); 2) at the individual-within-group level, through perceptions of one's individual treatment by the manager as compared with the treatment of others in the group (RLMX); and 3) at the group level, by group-level variability in LMX quality, which shapes the extent to which meaningful differences in

treatment in the employee–organization exchange can be derived on the basis of these comparisons.

3.3 LMX Differentiation (LMXD)

As an essential assertion in leader-member exchange (LMX) theory, leaders differentiate among their followers (Liden, Sparrowe, & Wayne, 1997). For many years, this phenomenon, known as LMX differentiation (LMXD), was treated as an inevitable reality of leadership in a group setting. LMX scholars have acknowledged that differences in LMX quality are salient to other coworkers (Tse, Lam, Lawrence, & Huang, 2013). This has led to an vein of research that has focused on the situation LMXD can be beneficial or detrimental for individual and their work team (Yu et al., 2018).

Henderson et al. (2009) defined LMXD as a process by which a leader, through engaging in differing types of exchange patterns with subordinates, forms different quality exchange relationships, ranging from low to high, with the, as such, LMXD refers to a set and outcome of dynamic and interactive exchanges that occur between leaders and members, the nature of which may differ across dyads within a work group

In Henderson et al. (2009) study, the author offered series of propositions regarding antecedents (such as leader characteristics) and outcomes (such as individual-within- group LMX quality) at individual, work group (antecedents such as group size, outcomes such as group member relationship), and organizational level (antecedents such as human resource practices, outcomes such as labor cost) theory of LMXD. Paik

(2016) firstly reviewed empirical findings at three levels. As the review, most LMXD studies focus on identifying outcomes at the team or individual level or concentrating on the moderating effect of LMXD on the cross-level product. Just small studies examined the antecedents of LMXD empirically. Scholars discussed the impact of LMXD on team performance as contingent on situational factors.

For the individual-level outcomes of LMXD, such as task performance, job satisfaction, employee well-being and stress, organizational commitment, turnover intention or withdrawal from the group, turnover intention or withdrawal from the group, satisfaction with coworkers, coworker helping or organizational citizenship behavior, and occupational self-efficacy were examined (Baker & Omilion-Hodges, 2013; Erdogan & Bauer, 2010; Erdogan et al., 2002; Hooper & Martin, 2008; Liden et al., 2006; Schyns, 2006).

Consistent with researchers who conducted team-level studies before, the two sides effect of LMXD are be proved. Differentiation of the LMX's subdimensions had a significant negative effect on job satisfaction and commitment (Schyns, 2006). Scholars observed that LMXD significantly negatively affected job satisfaction and well-being (Hooper & Martin, 2008). In contrast, in consideration of the positively relationship between LMXD and trust in teammates, Yuan and Jian (2012) promoted a study improved the outcomes of LMXD as organizational commitment and turnover intention.

LMXD was found to cross-level moderate the individual LMX, also found to moderate the effects of mean LMX (Gooty & Yammarino, 2016; L. Ma & Qu, 2010). Specifically, when the LMX difference between team members is small, the average positive impact of LMX on team effectiveness and team identity and its negative impact on team conflicts will be reduced (Boies & Howell, 2006). Team diversity as a team level factor that checked with LMXD in some cases. Specifically, it was found that low LMXD offset the positive impact of demographic diversity on turnover rates. In summary, at the team level, high LMXD seems to increase the positive impact of the average LMX on team-level results and reduce the negative impact (Nishii & Mayer, 2009).

For operationalization, based on the review, the within-team variance (or standard deviation) of a measure of LMX is the most objective way to measure LMXD, which researchers most utilize (e.g., Erdogan & Bauer, 2010; Nishii & Mayer, 2009), except for two studies in which the coefficient of variance of individual LMX scores (Herdman et al., 2017) and the r_{wg} score on LMX-7 items (Boies & Howell, 2006) were used.

3.4 The Debate on the Effect of LMX Differentiation (LMXD)

As Paik (2016)'s compressively review, scholars acknowledged that both positive and negative effects of LMXD are plausible, and they made predictions with regard only to its interaction effects with the moderators rather than focused on the

direct outcomes. Situational factors are closely related to LMXD and overall performance.

A recent meta-analysis conducted by Yu et al. (2018) emphasized the extant perspectives on LMXD are role theory (e.g., Liden et al. (2006)), social exchange theory (e.g., Liao, Liu, and Loi (2010)), social comparison theory (e.g., Henderson, Wayne, Shore, Bommer, and Tetrick (2008)), and relative deprivation theory (e.g., Erdogan and Bauer (2010)). And emphasized the ideal theoretical lens of resource-allocation perspective can been typically assumed in theorizing the influences of LMXD on group functioning.

Most recently, Han, Liao, Han, and Li (2021) concluded the opposite understanding from a functional and dysfunctional perspective of LMXD. LMXD can enhance group performance because it represents a leader's selective allocation of roles and works resources at their disposal based on group members' differences, incompetence, performance, and contribution (Graen & Uhl-Bien, 1995; Liden et al., 2006). But if focusing on dysfunctional aspects of LMX differentiation may hurt group performance by dividing the group into small private groups (Liden et al., 1997). Group members tend to establish contact with other people with similar LMX quality, while developing bad relationships and unfavorable emotions outside of their own group. As a result, the intragroup division stemming from LMX differentiation may foster competition and hostility between members with high- and low-quality LMX, thus undermining interpersonal processes and group performance.

This study reviewed some representational studies that explored the moderating role of LMXD, which presented the contrary results under the frame of social theory. <Table 5> represented the mixed findings that have been produced in studies of moderating effect of LMXD. In conclusion, scholars found that LMXD moderated the positive effect of LMX, such that high LMXD reduced the positive LMX effect. On the other hand, other researchers found that LMXD strengthened the positive impact of antecedents on subsequent outcomes. Given these conflicting findings, we believe that there is a need for more studies focusing on the cross-level development of LMX and LMXD on both individual and team-level outcome variables.

<Table 5> Empirical Research on Moderating Role of LMXD

Theory/Perspective	IV	ME	DV	Mo Result	Paper
Social cognitive theory	LMX TMX	Self-efficacy	Individual creativity	LMXD (-)	(Liao et al., 2010)
Equity	Team coaching		Team effectiveness	LMXD (+)	(Chin-Yun, Long-Sheng, Ing-Chuang, & Kuo-Chin, 2010)
Person-job fit theory	Job crafting		Work meaningfulness	LMXD (+)	(Kui, Kaili, & Xiufeng, 2019)
Group engagement model	LMX		OCB Turnover intention	LMXD (-) LMXD (+)	(Harris, Li, & Kirkman, 2014)
Shared reality theory, social exchange	LMX		Performance	LMXD (-)	(Gooty & Yammarino, 2016)
Universalism, particularism	LMX		Leaders' subjective performance evaluation	LMXD (+)	(L. Ma & Qu, 2010)
Role engagement theory, role system theory	LMX quality		Role Engagement	LMXD (+)	(Li & Liao, 2014)

Theory	IV	Me	Mo	DV		Source
Social network theory, social exchange theory, and social identity theory	Team network	LMX		Team identification	LMXD (-)	(Guan et al., 2013)
Social cognitive theory	Mean LMX			Team potency Team conflict	LMXD (-) LMXD (+)	(Boies & Howell, 2006)
Social categorization, expectation states theories	Diversity			Turnover	LMXD (-)	(Nishii & Mayer, 2009)
NF	Task conflict			Task performance, Relationship conflict	LMXD (+) LMXD (-)	(Bradley, Liu, & Zhang, 2020)
NF	Political skill	LMX		Job performance	LMXD (+)	(Huang & Weng, 2015)
Motivated information processing in group (MIP-G) model	Team learning orientation	Team task reflexivity		Team performance	LMXD (+)	(Y. Wang & Lei, 2018)
Social learning and self-efficacy elements of social cognitive theory	LMX	Self-efficacy		Knowledge sharing	LMXD (-)	Kim, Phillips, Park, & Gully, (2021)

Source: author sorted out based on related previous studies.
IV=independent variable; Me=mediator; Mo=moderator; NF=not found

4. Creativity

Creativity has basically described the development of ideas about practices, procedures, produces, and services that a novel and potentially valuable for an organization (Shalley & Gilson, 2004). According to Hughes, Lee, Tian, Newman, and Legood (2018), workplace creativity is mainly related to the cognitive and behavioral processes used to generate novel ideas. Driven by the assumption that employee creativity is beneficial for work outcomes, researchers have devoted considerable

attention to identifying its mechanism in the context of creativity. It has been suggested that leaders are an essential facet of the work context for creativity. Despite this, the role of leadership in the creative process remains attention. Given the dominant role of leadership in the workplace, research keeps growing to identify the myriad of interacting leader and employee factors that may shape creativity (Tierney, Farmer, & Graen, 1999). Zhou and Hoever (2014) pointed out that workplace creativity exhibited by individual employees and teams is crucial for organizational innovation and success. They summarized the research on workplace creativity. They separated creativity as an individual outcome and a team outcome to review the antecedents of creativity as actor-centered, context-centered, and joint consideration of actor and context interact.

4.1 Individual Creativity

A considerable amount of research has studied the creativity of individual members. Creative employees are more likely to express unusual thoughts. There are three reasons why employees are motivated to be creative, 1) the need for novel, varied, and complex stimulation, 2) the need to communicate ideas and values, 3) the need to solve problems (Shalley & Gilson, 2004). Following the scope of workplace creativity (Hughes etl al., 2018), individual creativity in workplace refer to employees generation of novel and useful ideas relating to products, services, processes, and procedures (Zhou & Hoever, 2014).

Many studies also illustrate the influence of the degree to which organizations, leaders and actors outside the organization support, expect or reward creativity on the

mental state of actors and their creativity. However, some studies point to the creative benefits of rewards. For example, Eisenberger and Rhoades (2001) found that accepting or expecting creativity rewards has a positive effect on subsequent creativity. They demonstrated that these effects are mediated by employees' intrinsic interest in work and perceived self-determination. Eisenberger and Aselage (2009) also studied the impact of performance reward expectations and creativity rewards. They found that this effect unfolds through a series of intermediary products, in which rewards, or their expectations have a positive impact on creativity through perception of performance pressure and self-determination as a distal intermediary and intrinsic motivation as a proximal intermediary.

Research indicates that leadership and leader's behavior foster creativity. To name out, transformational leadership (S. J. Shin & Zhou, 2003), benevolent leadership (A. C. Wang & Cheng, 2010), shared leadership (J. Gu, Chen, Huang, Liu, & Huang, 2018), ethical leadership (Y. Ma, Cheng, Ribbens, & Zhou, 2013), supervisor support (Amabile, Schatzel, Moneta, & Kramer, 2004), supervisor informational fairness and interpersonal justice, positive LMX (Khazanchi & Masterson, 2011), which be often proved positively related to creativity. Alge, Ballinger, Tangirala, and Oakley (2006) found that information privacy with the mediating of psychological empowerment can result to high individual creativity. Likewise, S. J. Shin and Zhou (2003) showed that the existence of creative colleagues not only intensifies the supervisor's close

monitoring of the negative impact on creativity, but also helps to take advantage of the supervisor's development feedback to promote creativity.

Additionally, leaders can shape employees' perception of the environment, through examples and norms, influence employees' perception, thereby promoting or weakening employees' creativity. For example, Shin and Zhou (2013) found that the influence of team diversity on the creativity of individual members is affected by the transformational leadership behavior demonstrated by the leader: when the leader is considered highly transformative, the influence of diversity on individual creativity is positive, and when the leader shows less or weak transformational leadership behavior, team diversity has no effect on members' creativity. Shalley and Perry-Smith (2001) discovered whether an individual expects an information evaluation or a control evaluation of his or her ideas will affect the effect of receiving creative examples, standard examples, or non-acceptance examples before completing the task.

4.2 Team Creativity

Creativity studies have generally focused on only one level of analysis at a time. Through the workgroups, organizations strive to maintain and enhance effectiveness. To successfully achieve this goal, organizational members need to develop novel, practical, and appropriate ideas while working within their teams. Prior research has highlighted the role of leadership in enhancing team creativity. However, the gaps addressed when and how to persist this positive relationship.

Team creativity may be defined as stemming from individual team members' creativity or as a culmination of complex interactions among the group as a whole. Taggar (2002) suggested that team creativity is the aggregate of individual creativity. However, the process of team creativity not simply a sum or average of each members' creativity because of the influences of relevant variables. Woodman, Sawyer, and Griffin (1993) suggested that consider team creativity as a process, the innovative product, the creative person, the creative situation, and how each component interacts with each other. Similarity views, the team member must collectively generate innovative ideas and make a collaborative process to achieve the ideas together (Amabile, 1996). And, team creativity is the creative interaction processes (Somech & Drach-Zahavy, 2013), such as exchanging perspectives and knowledge, collaborate or resist, take risks and challenges (George & Zhou, 2007).

Several studies focused on how the characteristics of a dyad or team effects team creativity. As a list, the team shared goals, participative decision making, a supportive climate, member socializing, and team members' work tenure (Gilson & Shalley, 2004) engaged in the team creative process.

Taggar (2002) found that the relationship between the aggregate individual member creativity and employee teamwork engagement. Hoever, Van Knippenberg, Van Ginkel, and Barkema (2012) found that the interaction of team diversity and team member's viewpoint adoption affects team creativity. Tsai, Horng, Liu, and Hu (2015) found an interactive effect among team characteristics for team creativity. Similarly,

Gong, Grauman, and Sha (2013) introduced the bottom-up relationship between individual creativity and team creativity which conducted a study examined both individual- and team-level perspective and proved averaged individual creativity is positively related to team creativity even controlled team information exchanges. By offering novel contributions to a multilevel theory of creativity, scholars believed that individuals must be brought back into the study of team creativity. Tu, Lu, Choi, and Guo (2019) explored three forms of team-level creativity from individual perspective, namely team creativity reported by members, average of member creativity, and dispersion of member creativity. They empirically demonstrated that various measures of team-level creativity.

4.3 Multilevel Research on Creativity

Scholars recommended that considering creativity nested in multilevel mechanisms (Batey & Furnham, 2006). Zhou and Hoever (2014) reviewed work creativity and concluded an interactionist perspective that emphasizes member-context interactive effects on creativity. Another respected multilevel research perspective on creativity is cross-level (Hirst, Van Knippenberg, & Zhou, 2009).

Back to the root of the interactionist multilevel theoretical model of creativity, Woodman et al. (1993) introduced persons, groups, organizational characteristics as inputs. The process and situation creativity transform to creativity product. Based on this model, the following theoretical multilevel models have been conducted with the nesting of individual factors within-group factors within organizational factors. The

interactions between the levels are not unidirectional. As the review explicated by Walker and Batey (2014), the theoretical multilevel models of creative individual, team, and organizational level factors and the convergence regarding some of the critical factors cross level. The majority of creativity researchers conduct empirical multilevel models of creativity. As conclusion by Walker and Batey (2014), individual focus and team focus are the two most common paradigm in creativity, another additional frame focusing on management practices and organizational-level factors.

This study conducted a comprehensive search for relevant studies to review the current empirical multilevel research on leadership and creativity. Using the google scholar database, searching for the keywords "leadership creativity multilevel," <Table 6> concluded the paper matched the topic and discussed individual creativity and team creativity with leadership.

We can found for multilevel mechanism on creativity, the well developed approaches such as transformational leadership, authentic leadership (Černe, Jaklič, & Škerlavaj, 2013), ethical leadership (Shafique, Ahmad, & Kalyar, 2020; Tu，Yidong & Lu，Xinxin, 2013) , empower leadership (Li, Wang, & Huang, 2018), and LMX (C. He, Teng, Zhou, Wang, & Yuan, 2021) are utilized most. Moreover, new approaches such as shared leadership (J. Gu et al., 2018; Q. Gu, Liang, & Cooke, 2020) , informal leaders (Pan, Liu, Ma, & Qu, 2018), and entrepreneurial leadership (Cai, Lysova, Khapova, & Bossink, 2019) have received attention.

Besides, one study dissued vertical leadership's sequence moderating effect on shared leasdership and creativity under multilevel perspective (W. He et al., 2020). About the nested level of leadership, both employee perceived leadership (individual level) and leader self-reported leadership style (team-level) are recognized in research. This study also found mean of employee perceived leadership aggregated in team-level is significant related to the result.

For team-level mediators and moderators, team climate and atmosphere be well tested in multilevel model. We found one study explored task characteristic, named, task interdependence as sequence moderating role. For individual level mediators and moderators, most tested is employee self-efficacy.

Connected the result with Hughes et al. (2018)'s review, the moderators on the process from leadership to creativity at multilevel models, can be found in team/organization context (climate, atmosphere, conflict), follower attributes (self-efficacy), leader contributes (formal leader), but based on the limited studies, we didn't found relationship attributes which be summarized as one moderating category by Hughes et al. (2018)'s study on leadership and creativity not restricted on multilevel study. About the mediating variables, consistent with Hughes et al. (2018)'s review, multilevel models of leadership and creativity can also be recognized into the broad categories on social relational, cognitive, affective, motivative. However, the theory and perspective of multilevel model, obviously reinforcing and combining act the process.

For the operationalization of multilevel creativity in leadership area, when objective data and experimental designs are not appropriate, most studies have employed a diverse range of measurement such as self-rated psychometric scales, other-rated (supervisor) psychometric scale (Hughes et al., 2018). The most commonly used creativity scales purport to assess is Zhou and George's (2001) items. Based on the ratio reported by Hughes et al. (2018), 37% of studies adopted Zhou and George's scale.

Again, one study assessed total creativity for team creativity by taking the sum of self-rating creativity, creative personality, and creativity achievement measures when z scored (Batey & Furnham, 2008). Besides, many researchers prefer the average of member creativity to substitute for team creativity. However, there are objections and divergences since team creativity is such a complex mechanism which not a simple process to sum and average the team member creativity. Moreover, supervisor rating has proven to be a valuable method of measure the team whole creating.

As mentioned, the level of creativity (e.g., person, team), the facet of creativity (e.g, product generated, process utilized), as well as the measurement approach are the focal points of analysis. For this study, we focused on individual and team-level creativity, since the topic with the relationship between vertical and shared leadership and the context with knowledge work team environment, the facet of creativity referred to idea generation and process and the multisource rating measurement approach adopted.

<Table 6> Multilevel Empirical Research on Leadership and Creativity (Two DVs: individual/team creativity simultaneously)

Theory	Le	IV	MO(1)	ME	MO(2)	Authors
Relational fairness theory	L2	Leader empowerment behavior	Status conflict	Climate		(Li et al., 2018)
	L1			Employee perceived status		
Identification TFL theory	L2	Transformational leadership		Group creative identity		(P. Wang & Zhu, 2011)
	L1	Perceived transformational leadership		Individual creative identity		
Information exchange	L2	Shared leadership	Task interdependence	Knowledge sharing	Task interdependence	(J. Gu et al., 2018)
Social influence	L2	Self-ascribed authentic leadership				(Černe et al., 2013)
	L1	Perceived authentic leadership		Perceived support		
TFL theory	L2	Transformational leadership		Innovative climate		(Jaiswal & Dhar, 2015)
	L1				Creative self-efficacy	
Social perspective	L2				Formal leader	(Pan et al., 2018)
	L1	Proactive personality		Informal leadership status		
Intrinsic motivation theory	L2	Mean perceived authentic leadership		Atmosphere		(Lei, Qin, Ali, Freeman, & Shi-Jie, 2021)
	L1			Creativity self-efficacy		
Social cognitive theory	L2	Ethical leadership		Knowledge sharing		(Shafique et al., 2020)
	L1			Psychological empowerment		

Theory	Le	IV	Me	Outcome	Source
Motivation	L2	Group ethical leadership		Intrinsic motivation	(Tu, Yidong & Lu, Xinxin, 2013)
	L1	Perceived ethical leadership		Intrinsic motivation	
Social cognitive theory	L2	Shared leadership		Team potency	(Q. Gu et al., 2020)
	L1			Individual competence	
Dual focused TFL	L2	Team-focused TFL		Knowledge sharing	(Dong, Bartol, Zhang, & Li, 2017)
	L1	Individual-focused TFL	Climate for innovation	Skill development	
LMX	L2	Abusive supervision	LMXD	Team LMX	(C. He et al., 2021)
	L1			LMXD	
Creativity-relevant processes	L2	Shared leadership	Group-Focused TFL	Average self-efficacy	(W. He et al., 2020)
	L1		Individual-focused TFL	Self-efficacy	
Social cognitive theory	L2	Entrepreneurial leadership		Team efficacy	(Cai et al., 2019)
	L1			Self-efficacy	
Motivation	L2	Shared leadership		Supportive climate	(Peter et al., 2015)
	L1	Shared leadership		Intrinsic motivation	

Source: author sorted out based on related previous studies.

Le=level; IV=independent variable; Me=mediator; Mo=moderator; L1=individual level; L2=team level

CHAPTER 3. Hypotheses & Research Model

1. Ethical Leadership and Shared Leadership

What needs to be emphasized again is shared leadership does not avoid or even eliminate the existence of nor constant need for a formally appointed team leader, also referred to as a vertical leader (Cox et al., 2003; Ensley et al., 2006; Pearce & Sims Jr, 2002). In particular, scholars agree that shared leadership supplements rather than replaces vertical leadership (Houghton et al., 2003). As the previous chapter concluded, shared leadership offers a relational, collaborative concept of leadership practice or phenomenon involving teams or groups that mutually influence one another and collectively share duties and responsibilities otherwise related to a single, central leader (Kocolowski, 2010). As evidenced in the literature, there are some factors that aid or drive the rise of shared leadership. Scholars mentioned the importance of understanding shared leadership and suggested formal leaders with humility can advance the development of shared leadership, thereby providing practical guidelines for training team leaders. Starratt (2005) argued that there is an ethical dimension to leadership that requires formal leaders to share their leadership responsibilities with others. Duignan and Bezzina (2006) proved that factors attracting organizations to opt for shared leadership are that the approach actually works in practice, builds commitment among those involved, and is ethical. It is invaluable to incorporate ethics throughout the implementation process to ensure that shared leadership is reinforced into the mental

processes of the employee. Carson, Tesluk, and Marrone (2007) noted an external antecedent condition that through supportive coaching, external or hierarchical leaders can help develop team members' motivation and capabilities to lead themselves and become self-direction that can facilitate shared leadership.

This study explored role theory to explain the positive relationship between ethical leadership and shard leadership. According to role theory, an individual taking-role through receiving and learning social norms and perform the behaviors expected, and making-role via changing or crafting some features of the expected behavior.

The philosophy of ethical leadership suggests that ethical leaders can become role models by setting examples. Ethical leadership is essentially a moral person with honesty, trustworthiness, integrity, fairness, and caring. That moral model is associated with the development of followers' correct values and good characters, such as fairness and responsibilities. They are unquestionably the index of normatively appropriate behavior in the eyes of followers (Tang, Bavik, Chen, & Tjosvold, 2015), thus build up credit as ethical role models. Through role modeling, ethical leaders promote altruistic behavior among organizational members. As a result, followers are expected to become more mutually dependent, more focused on cooperation than competition, and more committed to the organization (Kanungo & Conger, 1993), more likely to feel psychologically safe to speak up their new ideas that challenge the status (Janssen, 2000).

As Kanungo and Mendonca (1996) identified that ethical leader's actions and behavior will be in line with the shared moral values. Ethical leaders as the deliverer of

the shared goals and values (Y. Shin, 2012), which benefits from performing teamwork efficiently through suggesting members take the roles. With motivation and empowerment, team members usually believed in themselves and have confidence in the work task so that they dare to stand out.

In addition to this, Brown et al. (2005) hold that ethical leaders are transparent and engage in open communication, promoting and rewarding ethical conduct among followers. What is more, ethical leadership provides followers with a voice. In line with this, ethical leaders allow followers to make decisions and listen to their ideas and concerns. De Hoogh and Den Hartog (2008) labeled this component of ethical leadership as power-sharing, which refer to allowing employees to participate in decision making and accept their idea opinions.

Ethical leaders are expected to do what is morally right through an inner obligation (Kanungo & Mendonca, 1996). Thus, they are expected to have a high internal obligation as well as high moral standards. Further, they engage in virtuous acts or behaviors that benefit others. So, it is reasonable to believe that team members effectively go through the "role-taking" influential under team shared goals and objectives under ethical leaders' direction and guide. Moreover, such leaders make principled and fair choices and structure work environments justly. In this kind of environment, team members' expectation of role is normative, and they will be more likely to perceive that their ethical leaders expect them to take the role as informal leaders who are participating in teamwork and taking the responsibility.

It has been identified that ethical leadership enhances team performance, such as collective organizational citizenship behavior (Y. Shin, 2012), effective team collaboration can be expected through ethical leadership. With the collective team outcomes, teams can develop a friendly distributed relationship with members, and team members will perceive the right to assign specific roles in teamwork. Simultaneously, ethical leadership may serve as a backup function necessary to guarantee the employee motivation and autonomy in the teamwork process even some team members cannot perform to take the shared leadership role function.

However, the mechanism that connects vertical leadership styles and shared leadership still remains unexplored, many studies have been done to distinguish the characteristics, but few studies have traced the relationship between vertical and shared leadership. Most existing research proved transformational leadership and empowering leadership (Ensley et al., 2006; Hoch, 2013; Pearce, 2007) as antecedents of shared leadership. To ethical leadership, as mentioned above, has been confirmed to relate to transformational and some dimensions of transactional leadership (Bedi et al., 2016). Vullinghs et al. (2018) empirically showed a joint relationship between ethical and passive leadership with follower burnout. About shared leadership, extant research suggests that empowering leadership (Hoch, 2013; Kang & Svensson, 2019), servant leadership (Kang & Svensson, 2019; L. Wang, Jiang, Liu, & Ma, 2017), transformational leadership (Hoch, 2013; Kang & Svensson, 2019), leader humility

(Chiu, Owens, & Tesluk, 2016) are positive related to the emergence of shared leadership in the team.

Although, as far as we know, not many researchers have examined the relationship between ethical leadership and shared leadership. However, standing on the foundations mentioned before, theoretical, and empirical evidence of ethical leadership's outcomes and the drives for shared leadership suggest potential connections. This study expects that ethical leadership is an antecedent that arouses shared leadership in a team:

H1a&b: Team leaders' ethical leadership (group and individual perception) will be positively associated with shared leadership.

2. Ethical Leadership and Creativity

Extant research has consistently shown that ethical leadership nurtures positive and morally desirable behavior among employees. For ethical leaders, their moral not only drives themselves to dedication, but also lens to examine how leaders' ethicality shapes the employee's sharing behavior and responsibility behavior. Employees in a team with the ethical leader will much easier to feel in-group and be trust, following with that, they are willing to devise sharing, communication, help behavior, namely, knowledge sharing (Tang, Bavik, CHEN, & Tjosvold, 2015), group ethical voice (Huang & Paterson, 2017), innovative work behavior (Tu，Yidong & Lu，Xinxin, 2013), prosocial rule-breaking behavior (Zhu et al., 2018), helping (Kalshoven & Boon, 2012).

Ethical leaders support their followers to set a stimulated will and action of creativity at work. Employees receive a variety of information in their workplace, which they use to evaluate the risk of their behavior. Ethical leaders are people-oriented by team members with opportunities to participate in the appropriate work job that best fits them and offer higher levels of autonomy to team members with freedom, independence, and discretion work environment; thereby, team members will. Have more control and less uncertainty in the task (Brown et al., 2005; De Hoogh & Den Hartog, 2008).

Researchers have identified a positive and significant link between leadership and member creativity behavior. Leaders with high moral values help build a strong community, effectively communicate with their followers (Brown et al., 2005), and establish an environment that motivates employees to think innovatively. For ethical leadership and creativity, Ma, Cheng, Ribbens, and Zhou (2013) concluded that ethical leadership positively relates to employee creativity. Tu and Lu (2013) investigated the influence of ethical leadership on innovative work behavior of 302 employees working in the manufacturing and telecommunication industries of china. They found that perceived ethical leadership positively relates to employee innovative work behavior. Dhar (2016), in their study of 468 employees, concluded that ethical leadership positively influences innovative work behavior. Mehmood (2016) also investigated the impact of ethical leadership on the creativity of 126 employees from private organizations of Pakistan. She noted that ethical leadership positively relates to

employee creativity. Chen and Hou (2016) reported a strong positive relationship between ethical leadership and creativity for employees of government R&D institutions in Taiwan. Accordingly, it is expected that:

<mark>*H2a&b*: Team leaders' ethical leadership (group and individual perception) will be positively related to member creativity.</mark>

Moreover, literature on creativity shows that creativity does not come from all employees (Simmons, 2011). As opposed to individual creativity, team creativity as a collective phenomenon refers to producing novel and valuable ideas concerning products, services, processes, and procedures by a team of employees (George & Zhou, 2007; Shin & Zhou, 2007). Current research mainly claimed that ethical leadership is positively related to the ethical climate where employees easily perceive trust and support creativity at the team level. Ethical leaders tend to create positivity in a team environment through their ethical behavior. Besides, scholars find out ethical leadership is positively related to justice climate, which refers to how a leader treats the group as a whole in a fair manner, and to followers' ethical behavior (Mayer, Aquino, Greenbaum, & Kuenzi, 2012), in these ways, ethical leadership contributes an overall consistency team environment where employees easy to perceive safe and equality and empowered. Based on environment stimuli theory, Tu et al. (2019) utilized ambient group stimuli theory (Hackman, 1992) proposed while ethical leadership positively related to team creativity, through the discretionary stimuli (Hackman, 1992) route

explain the pathways through ethical leadership to average and dispersion of member creativity.

Ethical leaders usually display genuine concern and care about their followers and proactively emphasize the importance of collective interest. Ethical leadership promotes attitudes and behavior such as interpersonal trust, psychological safety, team cohesion, which are positively related to creativity at the team and group level. Tu and Lu (2013) proposed that individual perceptions of ethical leadership and group ethical leadership positively relate to employees' innovative work behavior. While at the group level, ethical leadership encompassed different connotations and predicted employees' innovative work behavior differently from the individual perception of ethical leadership.

In the team context, ethical leadership leads team members to understand a set of objectives and directions. Ethical leaders support their followers to set a stimulated cause of creativity at work. When an employee believes that his or her work is meaningful, he or she helps others in generating new and valuable ideas (Amabile, 1996). In the team context with the model of an ethical leader, the team member will be enhanced with the shared objective and direction. Scholars also suggested that ethical leaders are likely to influence members by enhancing greater identification with the group or organization based on social identity theory. The definition of ethical leadership suggests that ethical leaders can become role models by setting examples, that moral model is associated with the development of followers' right values and good characters, such as fairness and responsibilities, team members are better

understanding the team goals and directions so turns to work in line with the effect of their leaders and engage in creativity to improve team performance.

Comparing with generating new source individually, an entire team creativity comes from members' hard working for constantly exchange views and knowledge, counter the trend of collective conformity, take risks and challenges (Amabile, 1996). This study tried to extend the theoretical basis for our study to include social information processing (SIP) theory (Salancik & Pfeffer, 1978), which better explains the connection between ethical leadership and team creativity. Under SIP, leaders are the primary sources from which members gather information about the job or interpersonal interaction. According, confronted with ethical leadership, team members may process the information provided by ethical leaders and correspondingly adapt their cognition and behaviors to the leadership environment. When the team leader exhibits moral and ethical behavioral information, team members may interpret such information and infer that their successful creative work is likely to be "supported" and "consistent" by the leader. Shaped by such inference, team members quickly focus on creativity and sufficient work with other members who receive similar information and are more likely to generate novel ideas. Specifically, ethical leadership statements and behaviors provide a safe signal to team members to safely benefit from team creativity. Research has shown that diversity in-group members influence interaction patterns among members as well as individual and group performance.

H3a&b: Team leaders' ethical leadership (group and individual perception) will be positively related to team creativity.

3. The Mediating Effect of Shared Leadership

Shared leadership is tested for several ways to lead to greater creativity in members and teams (Hoch, 2013; Pearce, 2004; Pearce & Manz, 2005). Bligh, Pearce, and Kohles (2006) explained shared leadership as the nexus of the knowledge creation process. Scholars have been present the evidence of how shared leadership works efficiently to foster employee creativity, even team or organizational innovation (Q. Gu et al., 2020; Hoch, 2013; Peter et al., 2015).

Shared leadership is that every employee can exhibit leadership since leadership revolves around how people are mobilized to do work rather than defined by position. Because it combines the best leadership abilities of team members, shared leadership is being tested as a possible factor to meet the challenging needs of employees' capabilities development (Pearce & Sims, 2000). Shared leadership fosters autonomy and participation and enhancing intrinsic motivation (Q. Gu et al., 2020; Hoch, 2013), represents a promising approach that lets every employee practice creativity. Drawing on psychological empowerment theory and related insights from self-determination theory, shared leadership fosters autonomy and participation and enhancing intrinsic motivation, represents a promising approach that lets every employee practice and engages in creativity with a work task. In the process of shared leadership, team members are collectively involved in leading the team, the team member will have a sense that they are a part of the team, team members can have more room to self-grow,

and self-direct work, which means that team members can shape the teamwork process as they understand is best suited and proactively draw on creativity behavior.

<mark>*H4*: Team shared leadership will be positively related to member creativity.</mark>

Shared leadership has been widely tested as an antecedent to team creativity. First, shared leadership can cultivate and accumulate the team's overall capacity by advantaging all members' knowledge and skill (Pearce, 2004), producing more resources for creativity. In a centralized leadership network of formal leadership, members are more likely to follow the leaders' direction. Shared leadership has potential implications for sparking team creativity by creating an environment of mutual assistance and cooperation because shared leadership appraises and recognizes members' unique expertise, and sharing, exchange, and a relationship occurs naturally. Team member diversity in knowledge, experience, and information, are transformed as advantageous available resources and smooth operation combine to form a production and operation of creativity.

Second, creativity is more likely to result when team members mutually influence and participate in the team. Shared leadership nurses team members with high confidence to practice positively and facilitate an inclusive environment allowed diversity and interaction (D'Innocenzo et al., 2016). Team members also will put extra effort into creativity due to shared leadership's shared cognition (Burke et al., 2003), through collaboration and empowering, which exposes team members to feel free to

produce creativity. Then, team creativity can be expected as the product of interaction and influence of team member under the effect of shared leadership.

Third, shared leadership also be proved contribute to the creative climate in the team and supportive climate for innovation (Peter et al., 2015), such as by developing a climate of creativity and support for new, or more broadly, by implementing a climate that helps the development of creativity. In other words, through shared leadership, the team member will perceive the support from vertical leadership. Team members may strengthen internal team communication or share the information and knowledge they grasp when they perceive supported and particular team environment. Moreover, it has been proved that communication and knowledge sharing with team members would improve individual creativity. Scholars appointed that shard leadership is benefitted to cultivate team creativity (J. Gu et al., 2018; Q. Gu et al., 2020; W. He et al., 2020).

==H5==: Team shared leadership will be positively related to team creativity.

We further assumed shared leadership as informal internal leadership sources broaden the boundary of ethical leadership effectiveness to multilevel creativity.

Examples where leadership has been shown to positively impact creativity through intermediate factors positively: Chen and Hou (2016) and Gu, Tang, and Jiang (2015) realized that ethical leaders could encourage creativity among their subordinates through reinforcement and role modeling. Asif, Miao, Jameel, Manzoor, and Hussain (2020) found that ethical leadership influences emotional commitment and work

engagement, thereby prompting followers to show creativity in their work. Tu et al. (2019) introduced psychological safety climate mediated the relationship between ethical leadership and creativity.

Under role theory, while ethical leadership focuses on developing morals, justice, and role modeling toward shared goals and values, shared leadership focuses on the ability to connect with other members in achieving the shared goals and values to team objectives. In addition, while ethical leadership focuses on how it encourages team members to take part in decision making and let the team members go through the "making-taking" of role, shared leadership focus on how team members operate between each other and "taking-making" role by themselves. We believe shared leadership can extend and lengthen the ethical leaders' effect on creativity. Since when team members taking the role of "shared leadership" made by their ethical leaders, shared leadership offers the new procedure for team members to make the role or craft the job creatively. In that, shared leadership indirectly linked the formal ethical leadership and creativity relationship.

Social relational mechanisms of leadership-creativity (Hughes et al., 2018) can explain the shared leadership's mediating function in ethical leadership's effect on creativity. Scholars regarded shared leadership as a relational phenomenon that involves patterns of reciprocal influence within a team (Small & Rentsch, 2010). Shared leadership not only involves the trusted relationship between leader and members but, more important is team members seem to have a positive work relationship with each

other. Shared leadership building trust working relationships in organizations. Scholars described when "informal leader" appeared in teams, and other members are consistently recognized and willing to give help to that "informal leader", because they believe that by supporting and following the "informal leader", the teamwork can be finished more efficiently (Wang et al., 2017).

Moreover, under cognitive mechanisms of leadership-creativity (Hughes et al., 2018), shared leadership proposed sharing empowerment and responsibility, reducing the team member uncertainly for work and increasing safe psychological, which let team members exhibit creative action uncertainty is properly controlled and supportive is perceived.

To sum, shared leadership should play a key role in the development and deepening of the leadership-creativity process because it encourages obligation and reduces uncertainty. In addition, shared leadership is the crucial facilitator of creativity because shared leadership lessens the perceived risk of creativity and creates psychological empowerment and a supportive environment that stimulates team member sharing and proactively engages in creativity. This study proposed that shared leadership be a crucial antecedent of multilevel creativity and an efficient pipeline to deliver the effect of ethical leadership.

H6a&b: Shared leadership mediates the relationship between team leaders' ethical leadership (group and individual perception) and team member creativity.

4. The Moderating Effect of LMX Differentiation (LMXD)

The central proposition emphasized by leader-member exchange theory is distrusting different relationships among team members by leaders within the work units. A reciprocal exchange relationship results in a high-quality LMX and determines the exchange quantities between leader and member, specifically, the amount of physical or intellectual resources, information, efforts, and supports (Liden et al., 1997). Nevertheless, diversity and inequality are mainly existence relationships that cannot be ignored. Additionally, higher levels such as group and organizational concepts and constructs of LMX theory are required to highlighted when considering an exchange relationship since the LMX developed as a multilevel conceptualization process (Graen & Uhl-Bien, 1995). The concept of LMXD is a group variability in the relationship's quality (Liden et al., 1997) among the team members and leader. The moderating effect of LMXD has been explained in several frameworks of team outcomes under a myriad of theories, such as social identity, social comparison, and situation theory. Scholars agreed that the effect of LMXD is complex and affected (Graen & Uhl-Bien, 1995; Henderson et al., 2009). This study followed Yu's research (Yu et al., 2018) and suggested utilizing allocation preferences theory (Leventhal, 1976) to understand the baneful and healthful buffering effect of LMXD.

According to allocation preferences theory (Leventhal, 1976), the leader should adopt the equity principle that makes allocations based on member's contribution, capability, and performance to increase productivity. However, turn to another view, if pursue the long-term sustainability mission which maintains social cohesiveness, the leader should adopt the equality principle, which treats members fairness and allocate the recourse equality.

No research explained LMXD's contingence role in the linkage of vertical and shared leadership. Since we introduced from the role theory way of looking at the ethical and shared leadership relationship, the dilemma is proposed as the conflict and distance of social interaction during the taking-making role. We then bring LMXD in the relationship under an equality perspective and predict that high LMXD will slow down the positive impact of ethical leadership on shared leadership.

When engaged in the high LMXD team, team members will preserve role conflict because the different relationships can undermine the principle of equality (Yu et al., 2018) that promotes harmony and coordination in the team. When low LMXD perception, leaders engage in relatively similar quality relationships and communication with members, resulting in proper role behavior by reducing the psychological distance between members and generating loyalty and trust in leaders and organizations. In other words, low LMXD means less burden for team members in taking roles and better integration of relationships. LMXD affects perceptions of justice climates (Henderson et al., 2009). Moreover, LMXD will affect the size of the out-

group in the team. Team members may be unlikely to share a sense of membership because they think they are outsiders in the team. Team members will perceive unfair resources assigned to them by leaders under high LMXD. Conversely, low LMXD decreases the difference and fades the line between in-group and out-group since members are more likely to identify justice and honest relationships in the work team. Therefore:

H8a&b: LMXD will negatively moderate the relationship between team leaders' ethical leadership (group and individual perception) and shared leadership. Specifically, high LMXD will diminish the effect of ethical and shared leadership, and low LMXD will enhance the effect.

Hypothesis 6 and 7 posited that shared leadership mediates the effects of ethical leadership on member creativity and team-level creativity. Given the moderating role of LMXD proposed in Hypothesis 8, the mediated relationship can be extended to a moderated mediation. Thus, the effect of ethical leadership on member and team-level creativity will be mediating by shared leadership, and LMXD will moderate the resulting indirect effect. Take the long view. This study will check whether LMXD positively or negatively influences the relationship between ethical leadership and creativity, considering the mediating effect of shared leadership.

H9: LMXD will moderate the indirect effects of team leaders' ethical leadership on member creativity via shared leadership.

H10: LMXD will moderate the indirect effects of team leaders' ethical leadership (group and individual perception) on team creativity via shared leadership.

<Figure 2> Conceptual Research Model

CHAPTER 4: Methodology

1. Overview

To test theoretical model and getting the findings of the analysis utilized to verify the relationships of each variable and the hypotheses, the moderating effect of LMXD in the relationship of vertical and shared leadership, and the mediating role of shared leadership to the effect of ethical leadership to multilevel creativity, this study

will adopt SPSS version 25, and rely on *M*plus *8* to test the multilevel moderated mediation model.

First, frequency analysis and average analysis will use as fundamental statistical analyses to identify the demographic characteristics of the respondents. Then to verify the validity and reliability of the measurement instruments used in this study, first, KMO and Bartlett test and exploratory factor analysis (EFA), which is visible and mathematically used for the factor extraction method. Additionally, a reliability analysis will conduct by multilevel confirmatory factor analysis (MCFA). Following, the correlation coefficients for the relationship between variables will be present out.

Before hypotheses test, the model fitness will be check out by multilevel structural equation model (MSEM). This study will compare the different models fit index to make sure the research model is valid and reliable. Hypotheses will be test by *M*plus.

<Table 7> Data Analysis Design

Part		Details	Carrier
Basic statistical analysis	Demographic	Frequency analysis	SPSS 25 *M*plus 8
	Validity analysis	Principal components analysis Exploratory factor analysis by Verimax rotation method	
	Reliability analysis	Cronbach's α	
		Confirmatory factor analysis	
	Correlation	Pearson's correlation coefficient	
	Model fit	Structural equation model	
Hypotheses testing	H1-10	*M*plus MSEM	

2. Sampling Procedure and Participants

Participation was achieved via direct solicitation and offline survey through door-to-door. Thanks to the support from the Human Resources Development Service in the U area of South Korea, the sample of this study was collected from HRDK. Teams with a designated leader were targeted because of one of this study's focus on the effect of vertical leadership on shared leadership. With the team leaders' permission, the survey taken by anonymous method, all team codenamed using number or letter decided by the team leader. The leaders from 31 qualifying teams were provided with two version questionnaires. They were asked to conduct the team leader version questionnaire and forward a separate team member survey questionnaire with team codename to their team members. Responses from team members and their team leader were matched using the team codename.

After two months of data collection, our final sample included 233 team members nested in 30 teams, with 30 team leaders. All team fulfilled the inclusion criteria that teams were required to consist of that at least three members and one formal assigned team leader. An average of 8.63 team members participated ($SD= 2.266$) who were, on average 34.38 years old ($SD= 6.687$). Among them, 61.8% were male, 38.2% were female. Team leaders were, on average, 49.53 years old ($SD= 4.208$); 73.3% were male, 26.7% were female. The majority of teams worked in the research and development department (30%), the support department (23.3%), or the strategic department (20%). Most team members (89.9%) had been worked in their team for 1

to 5 years, and 7.7% worked in their team for more than 5 years. Most team leaders

(93.3%) had been leading their team for at least a year, and 16.6% led their team for

more than 5 years.

\<Table 8\> Descriptive Statistics of Sample

Sample characteristics		Team leader (N=30)		Team member (N=233)	
		Frequency	Percent (%)	Frequency	Percent (%)
Gender	Male	22	73.3	144	61.8
	Female	8	26.7	89	38.2
Age	20-30	/		59	25.3
	30-40	/		120	51.6
	40-50	17	56.6	50	21.4
	50-60	13	43.4	4	1.7
Position	Clerk	/		2	0.9
	Agent	/		66	28.3
	Section chief	1	3.3	101	43.3
	Deputy director or above	29	96.7	64	27.5
Team working years	Less than 1 year	2	6.6	6	2.6
	1-5 year	23	76.6	209	89.9
	5-10 years	5	16.6	17	7.1
	More than 10 years	/		1	0.4
Education	High school diploma	/		5	2.1
	College diploma	/		3	1.3
	Bachelor	8	26.7	157	67.4
	Postgraduate or above	22	73.3	68	29.2

3. Measurement of Variables

This study used a 5-point Likert-type scale ranging from 1(does not agree at all)

to 5 (fully agree) for all scales in the study.

3.1 Ethical Leadership (EL)

Supervisor's ethical leadership was evaluated by the team subordinates during. It was measured with the ten items on the Ethical Leadership Scale developed by Brown et al. (2005). The representative items were as follows: "My supervisor conducts his/her personal life in an ethical manner," "My supervisor defines success not just by results but also the way that they are obtained," "My supervisor listens to what employees have to say."

3.2 Leader-member Exchange Differentiation (LMXD)

This study based on Grean and Uhl-Bien's (1995) 7-item to evaluate employees' ratings on the leader-member exchange relationship quality then compute out LMXD. The items included "Your leader understands your job problems and needs well", "Your leader recognizes your potential well." It is widely accepted to measure LMXD in an objective manner for operationalization, that is, the within-team variance (or standard deviation) of a measure of LMXD. After skimming the Korean academic papers on LMXD, this way to measure LMXD is tested by several scholars with Korean samples (e.g., Dong & Chung, 2020; Lee & Choi, 2015).

3.3 Shared Leadership (SL)

This measure adapted the 25-item scale for assessing shared leadership that was developed and validated by Hiller, Day, and Vance (2006) and used by Bang (2013) for Korean sample.

Sample items include "other members and I deciding how to go about our team's work", "diagnosing problems quickly", "showing patience toward our team members," and "helping to develop each other's skills."

3.4 Individual Creativity (IC)

This study utilized 6 items scale based on S. J. Shin and Zhou (2003) to operate individual creativity. The scales widely tested based on Korean sample and showed great reliability (e.g., Kim, 2016; Yoo, 2019). Sample items include "I often take a new approach to the problem," "I do not hesitate to take risks," and "I come up with new and practical ideas to improve performance."

3.5 Team Creativity (TC)

This study adapted Zhou and George (2001)'s 13 scale to measure team creativity. Team leaders were asked to report their team creativity performance. The Korean version was adopted and tested by Choi (2014). Sample items include "members in this team tend to suggest new ways to achieve teams' goals.", "members constantly search for new technologies, procedures, techniques or product ideas for team", and "team members tend to suggest new ways to improve the (business) quality for team."

<Table 9> conclude the composition of instruments used in this dissertation.

<Table 9> Composition of Instrument

Variables	Items	Source	Responder	
			Team leader	Team member
Ethical leadership	10	Brown et al., (2005)		O
LMXD	7	Graen & Uhl-Bein, (1995)		O
Shared leadership	25	Hiller et al., (2006)		O
Individual creativity	8	Shin & Zhou, (2003)		O
Team creativity	13	Zhou & George, (2001)	O	
Team characteristics	2	Team size; Team name	O	
Demographic characteristics	8	Gender; Age; Education; Job position; Job department; Team working time	O	O

3.6 Control Variables

To minimize potential alternative explanations for the relationship reported in this study, this controlled for several demographic variables to exclude potential alternative explanations for analysis (Bernerth & Aguinis, 2016). In line with previous research (Carson, Tesluk, & Marrone, 2007; Hoch, 2013; Small & Rentsch, 2010), this study controlled for team size, gender, position, and team tenure. Team size was assessed by asking the team leader for the number of members within the team. Gender was dummy coded (0=male and 1=female). Position as assessed by asking each team member and leader their positions and coded as 1 = clerk; 2 = agent; 3 =section chief; 4 = deputy director or above. Team tenure was assessed by asking each team member and leader their length of tenure (i.e., years spent in the current team).

4. Factor Analysis

Before testing the hypotheses, this study examined the empirical distinctiveness of the variables in data sample by performing confirmatory factory analysis (CFA). This study conducted multilevel CFA using original data before sample-splitting and aggregating individual-level data, which eliminated the constructs measured at the individual level but then aggregated to the team-level using split-group design. The CFA, which included between- and within-level ethical leadership (9 items), shared leadership (12 items), LMXD (6 items), individual creativity (4 items), and team creativity (8 items).

Result in <Table 10> indicated items loading well in factor and acceptable fit (Chi-square=944.076, df=448, X²/df=1.914, p-value=0.000, RMSEA=0.069, CFI=0.913, TLI=0.904, SRMR value for within=0.048, value for between=0.052). Moreover, this model fit significantly better than all the other alternative models (see <Table 11>). The result support the discriminant validity of the variables in the current analysis.

<Table 10> Multilevel CFA

Construct	Items	Estimate	STDYX	S.E.	Est./S.E.	P-Value	AVE	CR
Within Level								
Ethical leadership (EL)	EL1	1.000	.739				.681	.951
	EL2	1.134	.811	0.067	17.012	0.000		
	EL3	1.104	.802	0.100	11.095	0.000		
	EL5	1.040	.721	0.084	12.310	0.000		
	EL6	1.025	.732	0.073	14.018	0.000		
	EL7	1.263	.818	0.088	14.426	0.000		
	EL8	1.237	.837	0.099	12.462	0.000		
	EL9	1.185	.781	0.072	16.547	0.000		

	EL10	1.125	.770	0.117	9.615	0.000		
Shared leadership (SL)	SL9	1.000	.773				.719	.968
	SL10	0.922	.768	0.065	12.751	0.000		
	SL11	1.020	.797	0.082	15.289	0.000		
	SL12	1.060	.785	0.084	17.205	0.000		
	SL13	1.061	.803	0.096	14.495	0.000		
	SL14	1.052	.808	0.106	12.884	0.000		
	SL15	1.136	.844	0.096	15.817	0.000		
	SL16	1.015	.783	0.145	8.330	0.000		
	SL19	0.941	.756	0.154	7.137	0.000		
	SL23	0.993	.798	0.100	12.247	0.000		
	SL24	1.041	.832	0.083	14.727	0.000		
	SL25	1.036	.764	0.140	8.446	0.000		
LMXD (LMXD)	LMX2	1.000	.803				.777	.954
	LMX3	0.929	.808	0.043	21.462	0.000		
	LMX4	0.947	.801	0.087	10.845	0.000		
	LMX5	1.014	.853	0.088	11.552	0.000		
	LMX6	0.991	.837	0.097	10.179	0.000		
	LMX7	0.988	.785	0.104	9.480	0.000		
Individual creativity (IC)	IC3	1.000	.761				.767	.930
	IC4	1.133	.901	0.064	17.683	0.000		
	IC5	1.055	.891	0.072	14.682	0.000		
	IC6	1.037	.858	0.064	16.128	0.000		
Between Level								
Team creativity (TC)	TC1	1.000	.853				.661	.940
	TC4	0.798	.772	0.130	6.143	0.000		
	TC5	1.009	.824	0.112	9.022	0.000		
	TC7	0.968	.777	0.145	6.676	0.000		
	TC8	0.934	.887	0.113	8.271	0.000		
	TC10	0.826	.780	0.143	5.772	0.000		
	TC11	0.719	.807	0.128	5.622	0.000		
	TC13	0.785	.796	0.129	6.089	0.000		

Chi-square=944.076, df=448, X^2/df=1.914, p-value=0.000,

Akaike (AIC)　　　　13012.326

Bayesian (BIC)　　　　13436.804

RMSEA=0.069, CFI=0.913, TLI=0.904,

SRMR(value for within=0.048, value for between=0.052)

This study conducted a series of confirmatory factor analyses to examine the distinctiveness of the key variables in the study. The overall model fit was assessed using the comparative fit index (CFI) and the Tucker-Lewis index (TLI), the standardized root means square residual (SRMR), and the root means square error of

approximation (RMSEA). The five-factor model indicated a good fit to the data (Chi-square=944.076, X^2/df=1.914, RMSEA=0.069, CFI=0.913, TLI=0.904, SRMR value for within=0.048, value for between=0.052), all indicators loaded significantly (p<.001) onto the intended latent variable, CFI>.0.900, TLI>.0.900, and X^2/df<3.00, SRMR<0.800, all indicators showed better fit than any other alternative models.

<Table 11> Comparison of Measurement Models

Model	X^2	df	X^2/df	ΔX^2	CFI	ΔCFI	TLI	RMSEA	SRMR$_W$	SRMR$_B$
1	944.076	493	1.914	-	.913	-	.904	.069	.048	.052
2	1851.420	451	4.105	907.344	.753	.160	.730	.115	.112	.052
3	2139.841	453	4.724	1195.765	.703	.210	.676	.126	.117	.052
4	2748.534	454	6.054	1804.458	.595	.318	.561	.147	.137	.052

N=233
1: Five factor model: ethical leadership, shared leadership, LMXD, individual creativity, team creativity
2: Four factor model: combined ethical leadership and shared leadership
3: Three factor model: combined ethical leadership, shared leadership, and LMXD
4: Two factor model: combined ethical leadership, shared leadership, LMXD, and Individual creativity

5. Common Method Bias

Even the data reported for independent variables and dependent variables were collected from different sides of respondent, and interaction effects do not inflate by common method bias (Siemsen, Roth, & Oliveira, 2010), the common method bias mitigated and seems as not to be problem of our study, but may remain a concern because of all independent variables were reported from one source (Podsakoff, MacKenzie, & Podsakoff, 2012). Therefore, this study adopted single-factor analysis to detect the potential for bias. The highest variance for all team member-reported variables was 23.913%, indicating no apparent concerns (Podsakoff et al., 2012).

6. Level, Aggregation, Dispersion Issues

According to our theoretical assumptions, furthermore, given that team members could have different opinions and perceptions about their leader and team, perceived vertical ethical leadership, shared leadership, LMX, individual creativity were assessed at the individual level (level 1). Team creativity was assessed at the team level (level 2), which was reported by the team leader directly.

Based on Kozlowski and Klein's (2000) multilevel theory, when unit-level constructs are assessed with individual-level measures, unit members provide individual-level data (for example, individual ratings of climate), which are subsequently combined in some way to depict the unit as a whole. This study considers a multilevel model, including team leadership and shared leadership are context variables for individual creativity (L2), LMXD as a moderator at team-level (L2), member creativity (L1), team creativity (L2).

We calculated the interrater agreement index $r_{wg(J)}$, the intraclass correlation *ICC(1)*, the group mean reliability *ICC(2)* (see <Table 12>), and *F* tests (see <Table 13>), indicating significant differences between average team scores, to justify the aggregation of ethical leadership, shared leadership, and LMXD to team-level.

The *ICC(1)* values indicate that a considerable part of the variance of shared leadership is explained by team membership (Bliese, 2000). The *ICC(2)* value is also above the required cut-off value of .60 (Glick, 1985), and according to LeBreton and Senter (2008) suggestion that interrater agreement index $r_{wg(J)}$ above the conventional

acceptable value of .70 can be sufficient to support the aggregation to the group level for variables. Therefore, using ethical leadership, shared leadership, individual creativity not only at the individual, but also at the team-level, is justified. Furthermore, aggregation of the team-level variance for LMX and individual creativity is also justified.

<Table 12> Result of Analysis Level Review Based on ANOVA Test

Variables	ICC(1)	ICC(2)	$R_{wg(J)}$
Ethical leadership	.322	.803	0.85
Shared leadership	.247	.718	0.88
LMXD	.314	.798	0.87
Individual creativity	.355	.825	0.86

<Table 13> Result of Analysis Level Review Based on F Test

Variables	Single measures	Average measures	F Value
	Intraclass correlation coefficient		
Ethical leadership	.591	.935	15.479[***]
Shared leadership	.507	.963	31.923[***]
LMXD	.509	.879	9.970[***]
Individual creativity	.650	.918	12.156[***]

[***]$P<0.001$

Using the operationalization of the LMXD across numbers (Erdogan et al., 2002), this study computed the team-level variance of LMX to yield the differentiation of LMX (LMXD). Furthermore, following the method utilized by Boies and Howell (2006) and Tu et al. (2019) with the theoretical supported by Kozlowski and Klein (2000), the scores of ethical leadership and shared leadership were centered at the mean scores of each team (group-mean centering) and assessed at team-level.

7. Correlation

\<Table 14\> Correlation & Internal Consistency Reliabilities at Individual Level

Individual level variables	*M*	*SD*	1	2	3	4	5	6
1. Gender(1=male 0=female)	.609	.489						
2. Position	2.979	.768	.150*					
3. Team tenure (year)	2.591	2.189	.078	.280**				
4. Ethical leadership	3.899	.683	.112	-.018	-.01	(.936)		
5. Shared leadership	4.004	.595	.039	-.208**	-.01	.498**	(.900)	
6. Individual creativity	3.498	.730	.014	.065	.134*	.199**	.293**	(.969)

N=233 for individual level data, Gender (1/0=male/female)
*Correlation is significant at the 0.05 level (2-tailed)
**Correlation is significant at the 0.01 level (2-tailed)
Reliabilities for the scales are in parentheses and presented along the diagonal

\<Table 14\> reports the means, standard deviations, reliability, and inter-scale correlations of variables at the individual level. The result of correlation analysis at the individual level provides that ethical leadership is significantly correlated with shared leadership (r=.498, p<.01) and individual creativity (r=.199, p<.01). Shared leadership is positively related to individual creativity (r=.293, p<.01).

\<Table 15\> Correlation & Internal Consistency Reliabilities at Team Level

Team level variables	*M*	*SD*	1	2	3	4	5	6	7	8
1. Team size	8.633	2.227								
2. Leaders' gender(1=male 0=female)	.867	.723	.158*							
3. Leaders' position	3.967	0.159	.235*	-.028						
4. Leaders' team tenure(year)	3.158	2.810	-.108	-.117	.025					
5. Ethical leadership(agg.)	3.902	.432	.025	.052	.150*	.030				
6. Shared leadership(agg.)	4.048	.349	-.344**	.039	.208**	.163*	.705**			
7. LMXD (agg.*SD*)	.717	.197	.196**	.072	.001	-.033	-.410**	-.287**		
8. Team creativity	4.087	.390	-.203**	-.134*	.029	.315**	.484**	.572*	-.246**	(.947)

N=30 for team-level data, 2-tailed test, significant level at the * 0.05 and **0.01
agg. = aggregation
agg.*SD* = aggregation team-level variance
Gender (1/0=male/female)
Reliabilities for the scales are in parentheses and presented along the diagonal

\<Table 15\> reports the means, standard deviations, reliability, and inter-scale correlations of variables at the team level. At the team level, ethical leadership (r=.484

p<.01) and shared leadership (r=.572 p<.01) are positively associated with team creativity. Ethical leadership (r=-.410, p<.01) and shared leadership (r=-.287, p<.01) are negatively related to LMXD.

CHAPTER 5: Results

1. Analyses: Ethical Leadership (EL), Shared Leadership (SL), LMXD, and Team Creativity (TC)

For evaluating the effect of leadership and team creativity, this study proposed hypothesis 1 that a positive effect from both team members perceived ethical leaders' behavior and team-level ethical leadership to shared leadership. After controlling demographic characteristics and team size, we brought in team member rates, and aggregation mean of ethical leadership and shared leadership. The results in <Table 16> (in p. 103) support hypothesis 1. Team members perceived leaders' ethical leadership is positively and significantly related to shared leadership cross-level (*estimate*=.746, p<.001), and team ethical leadership is also positively and significantly related to shared leadership at the team-level (*estimate*=.504, p<.001).

Hypotheses 3 posit that team leaders' ethical leadership is positively related to team creativity. Based on the hypotheses, team members perceived ethical leadership included in the model to know precisely the effectiveness of ethical leadership. This study utilized MSEM through *M*plus tested the main effect of ethical leadership,

including mediating the impact of shared leadership at 2-2-2 model and 1-2-2 model (Preacher, Zhang, & Zyphur, 2011; Preacher, Zyphur, & Zhang, 2010). The results of Model 1 showed in <Table 16> supported H3a that team-level ethical leadership is positively significantly related to team creativity (*estimate*=.792, p<.001). Meanwhile, H3b team-level ethical leadership shows a significant relationship with team creativity across the level (*estimate*=.446, p<.001). These effect patterns confirmed that team members' perceived leaders' ethical leadership and team-level ethical leadership positively affected team creativity reported by team leaders. Hypotheses 3 were accepted.
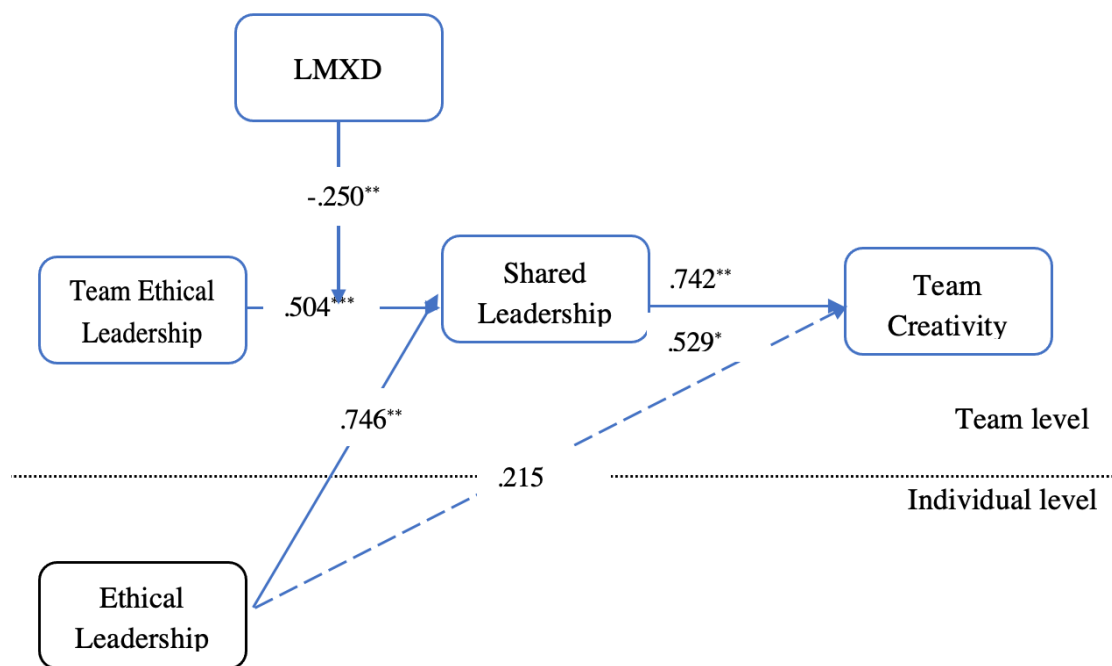
Hypotheses 5 proposes that shared leadership will positively affect team creativity, and Hypotheses 7 proposes that shared leadership mediates the effect of ethical leadership on team-level creativity. To test and compare these mediation hypotheses, <Figure 3> (in p. 96) presented the paths. The model in <Table 16> reports that shared leadership positively relates to team creativity at the 1-2-2 model (*estimate*=.529, p<.05), but irrespectively, team members perceived leaders' ethical leadership changed to statistically insignificant with team creativity on this multilevel mediation model (*estimate*=.215, p=.139, ns). Moreover, the indirect effect from team member perceived leaders' ethical leadership to team creativity (1-2-2) showed statistically insignificant (*estimate*=.391, p=.370, ns) in the presence of shared leadership. The model index of the 2-2-2 model (AIC=107.636, BIC=138.696) shown better model fit than the 1-2-2 model (AIC=511.448, BIC=545.958). At the 2-2-2

model, team-level ethical leadership kept a positive effect on team creativity (*estimate*=.263, p<.000) in the presence of mediating role of shared leadership. Furthermore, the indirect effect from team ethical leadership to team creativity (2-2-2) showed statistically significant (*estimate*=.488, p<.000). In that, hypotheses 5a and 5b are all supported. With the result, this study recognized shared leadership is fully mediating the relationship between individual perceived ethical leadership and team creativity cross level. Moreover, shared leadership is partially mediating the relationship between team ethical leadership and team creativity.

To test the moderating role of LMXD, since this study failed to recognize the positive relationship between individual-level ethical leadership and team creativity with shared leadership functions. This study obsessed with the 2*2-2-2 MSEM model for team creativity to explore the moderated mediation model. The result is presented in <Table 16>. This study found out the hypothesized moderating effect of LMXD on the relationship of vertical ethical leadership and shared leadership at the team level, shown a negative result consistent with the proposition. The result indicates a significant moderator effect (*estimate*=-.250, SE=.093, p<.05). <Figure 5> (in p. 101) displays the significant interaction effect. The team member who perceived their team LMXD low (sample mean -1 SD) engaged in more shared leadership behavior (*estimate*=.440, p<.000, 95% CI [.358, .529]) when their team leaders showed more ethical leadership behavior. In contrast, a weakened relationship of ethical leadership and shared leadership (*estimate*=.248, 95% CI [.051, .439]) was found for the team

member who perceives their team LMXD high (sample mean +1 SD). As proposed, there was a positive relationship between ethical leadership and shared leadership when LMXD was low. In contrast, a negative relationship was observed between the two variables when LMXD was high. Therefore, Hypothesis 8 was accepted.

<Figure 3> Findings of EL-SL-TC Analyses

Dash line= insignificant path.

2. Alternative Analyses: Ethical Leadership (EL), Shared Leadership (SL), LMXD, and Individual Creativity (IC)

Alternative analyses still adopted *M*plus monitoring EL->SL->IC model through MSEM analysis (see <Table 17> in p. 104). As our research design, the multilevel mediation 2-2-1 model and 1-2-1 model should be compared and chosen. However, considering that the observed ethical leadership and shared leadership

variables are aggregated from the individual level to produce the team level with the same measurement content, ethical leadership and shared leadership are context variables for individual creativity. With the aim to clearly check the issue of multilevel mediation, the result of the multilevel mediating 1-1-1 (Preacher, Zhang, & Zyphur, 2011; Preacher, Zyphur, & Zhang, 2010) are revealed in <Table 17>.
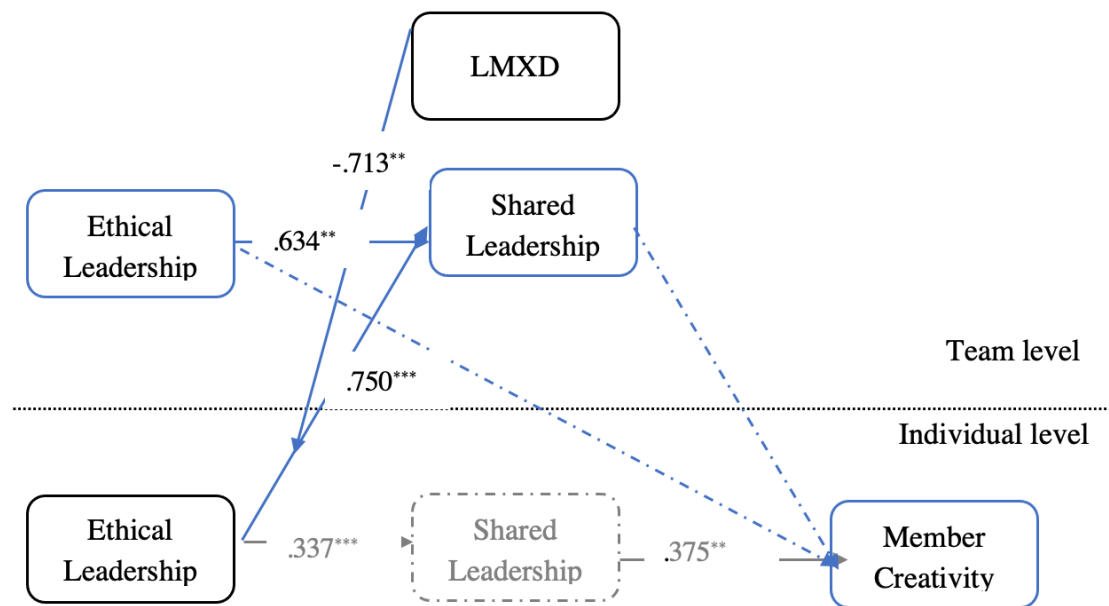
Reexamining hypothesis 1, we got a complete understanding of the relationship between vertical ethical and shared leadership. When considered team members' individual creativity as the outcome, this study found the relationship between ethical leadership and shared leadership consistent with the result presented by team creativity. Therefore, Hypothesis 1 can be accepted with no doubt.

We could not accept the 2-2-1 model since team ethical leadership has shown an insignificant impact on individual creativity cross-level (*estimate*=.096, p=.216, ns). Then we checked the 1-1-1 model, shared leadership demonstrated the full mediation through ethical leadership to creativity at the individual level since the main effect of ethical leadership reduce to insignificant (*estimate*=.409, p<.000 to *estimate*=.085, p=.302, ns), the indirect within level is significant (*estimate*=.126, p=.011). In the 1-2-1 model, with regret, this study didn't find statistically significant evidence for cross-level mediation.

Then after checking the model fit of models, the 1-2-1 model shown the best model fit (CFA=1.000, TLI=1.000, Chi-square=18.302, p<.001, AIC and BIC relatively most minor), this result is also consistent with the theory that shared

leadership should be considered as a team-level concept. In this way, to further capture

the moderating role of LMXD, Since the measure defined LMXD as the variability of

the team, this study would not consider LMXD run in level 1. we produced 2*-1-2-1 to

give the alternative adminicle to hypothesis 8 which was proved in single team-level.

First, LMXD has no relationship with shared leadership cross-level, and rather than

expected, and team LMXD was also negatively moderate the path through EL to SL

cross-level (*estimate*=-.713, p=.006). Therefore, Hypothesis 8 was accepted again.

<Figure 4> Findings of EL-SL-IC Analyses

Dash line= insignificant path.
The gray part is not included in the hypotheses.

3. Result Review

3.1 The Main Effect of EL

The hypotheses test result concluded in <Table 19>. We discussed that vertical

ethical leadership is a strong antecedent for shared leadership. Hypothesis 1 (EL -> SL)

was entirely accepted based on the multilevel exploration of EL and SL. This study got a complete understanding of the relationship between vertical ethical and shared leadership. We found that team members perceived ethical leadership was positively related to team shared leadership cross-level. Moreover, team ethical leadership was positively affected team shared leadership at the team level.

Hypothesis 2 and 3 (EL ->IC/TC) were supported that this study recognized the ethical leadership is contribute to multilevel creativity. This study found out that the more team members perceived their leader ethically, they would be more willing to perform creative activities. Moreover, team ethical leadership was positively related to team creativity whole performance. Nevertheless, team-level ethical leadership was not related to team member creativity with a drop-down effect.

3.2 The Mediating Effect of SL

Hypothesis 4-7 proposed the direct effect and mediation role of SL. First, this study recognized that shared leadership presented a strong influence on individual and team creativity directly. Then, to accurately grasp the path of EL -> SL -> TC/IC, we refer to the above procedure study 1 and the alternative analyses results. Both the total effect, indirect, and direct effect of team EL on TC are significant. This study recognized the partial mediating role of shared leadership on the team ethical leadership effect on team creativity through the 2-2-2 multilevel mediation model. The result also recognized the full mediating role of shared leadership on the individual perceived

leaders' ethical leadership effect on team creativity through the 1-2-2 multilevel mediation model.

For the shared leadership on individual creativity, since we could not support the 2-2-1 multilevel mediating model, team ethical leadership has an insignificant impact on individual creativity cross-level. Then we recognized the 1-1-1 model, and shared leadership demonstrated the complete mediation through ethical leadership to creativity at the individual level. Regarding the evidence that the significant main effect of ethical leadership is insignificant, the indirect path within-level is significant. In the 1-2-1 model, this study did not find statistically significant evidence for cross-level mediation with regret.
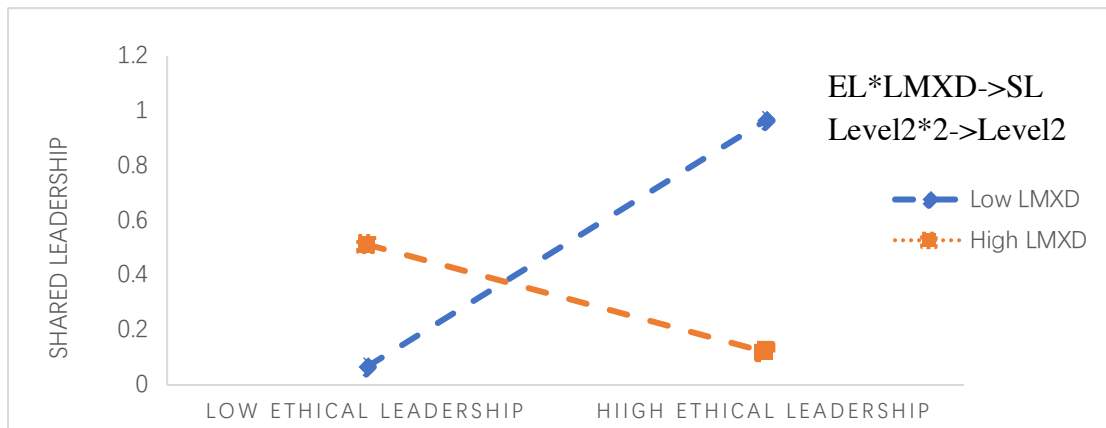
3.3 The Moderating Effect of LMXD

Hypothesis 8 proposed the moderating effect of LMXD. The result indicates a significant negatively moderating influence. Then, this study further checked simple slope tests for low levels of LMXD and found that the regression slope for low LMXD was positive and significantly different from zero. Following the method described in Bauer and Curran (2005), this study used the Johnson-Neyman technique to evaluate interactions in a multilevel model.

In contrast to the pick-a-point approach, the Johnson-Neyman technique allows to the identification of the region of the significance for the effect of ethical and shared leadership (Bauer & Curran, 2005; Hayes & Scharkow, 2013), the overall model $F (3, 229)= 31.192$, p= 0.000, R-squared= 0.290; Adjusted R-squared= 0.281. When LMXD

is >= -0.35 (minimum) and <= 0.37 (JN bound), the relationship between ethical and shared leadership is significantly positive (slope estimate range: 1.21 to 0.30). This region of significance includes 93.56% of the sample.

<Figure 5> Moderating Role of LMXD on EL->SL

EL*LMXD->SL
Level1*2->level2

- - -◆- - Low LMXD
·····✳···· High LMXD

(Y-axis: SHARED LEADERSHIP; X-axis: LOW ETHIICAL LEADERSHIP, HIGH ETHICAL LEADERSHIP)

EL*LMXD->SL
Level2*2->Level2

- - -◆- - Low LMXD
·····✳···· High LMXD

(Y-axis: SHARED LEADERSHIP; X-axis: LOW ETHICAL LEADERSHIP, HIIGH ETHICAL LEADERSHIP)

As proposed, there was a positive relationship between ethical leadership and shared leadership when LMXD was low, whereas a negative relationship was observed between the two variables when LMXD was high. So, it can be seen as when high ethical leadership and low LMXD are most exciting for shared leadership.

3.4 The Moderated Mediation Model

Hypotheses 9 and 10 propose that the indirect effect of ethical leadership on member creativity through shared leadership would be contingent upon the level of LMXD. The indirect effect becomes stronger when LMXD is low than high. This study tested this multilevel moderated mediation hypothesis by multilevel regression model utilizing *M*plus. The results presented in <Table 18> (in p. 105) demonstrated that the conditional indirect effect was contrary to different levels of creativity.

For individual creativity, the direct effect (*estimate*=0.138, 95% CI [.072, .225]), the indirect effect was stronger when LMXD is low (*estimate*=.229, 95% CI [.079, .414]), at the same time, high LMXD were result to low effect to individual creativity (*estimate*=.083, 95% CI [.007, .205]).

The difference between the indirect effect of high and low is statically significant (*estimate*=-.146, p<.05). For team creativity, the more positive EL-TC when LMXD was low (sample mean -1 SD) (*estimate*=.542, 95% CI [.346, .733]) than when LMXD was high (sample mean +1 SD) (*estimate*=.383, 95% CI [.184, .805]).

For individual and team creativity, the indirect effects of ethical leadership received larger absolute values as the level of LMXD for creativity increased from high to medium than low. The conclusion of hypotheses shown in <Table 19>. According to this finding, individual creativity and team creativity should be most foster when the team has a high level of formal ethical leadership and a low level of LMXD with the shared leadership stimulating in the team.

<Table 16>The Moderated Mediation Effect of EL->SL->TC (Multilevel)

Path	level	Estimate	SE	t	p	Model information
Gender-TC	1-2	-.318	.260	-.933	.351	
Position-TC	1-2	-.322	.378	-.851	.395	
Team tenue-TC	1-2	.356	.348	1.025	.305	CFA=.469 TLI=.332 X^2=64.323(.006)
Team size-TC	2-2	-.067	.043	-1.573	.116	$SRMR_w$=.122 $SRMR_b$=.210
Leader gender-TC	2-2	-.131	.119	-1.101	.275	AIC=2324.340
Leader position-TC	2-2	-.325	.515	-.632	.528	BIC=2424.420
Leader tenue-TC	2-2	-.066	.031	2.136	.033	
EL-TC	1-2	.446	.031	3.744	.000	
EL-TC	2-2	.692	.040	3.962	.000	
EL-SL	2-2	.504	.152	3.320	.001	CFA=1.000 TLI=1.000 X^2=15.345(.001)
EL-TC	2-2	.263	.028	8.763	.000	$SRMR_w$=.000 $SRMR_b$=.000
SL-TC	2-2	.742	.266	2.787	.005	AIC=107.636
EL-SL-TC	2-2-2	.488	.102	4.806	.000	BIC=138.696
EL-SL	1-2	.746	.198	3.771	.000	CFA=1.000 TLI=1.000 X^2=18.392(.000)
EL-TC	1-2	.215	.164	1.471	.139	$SRMR_w$=.000 $SRMR_b$=.001
SL-TC	2-2	.529	.241	2.235	.020	AIC=511.448
EL-SL-TC	1-2-2	.391	.436	.896	.370	BIC=545.958
LMXD->SL	2-2	-.192	.088	-2.174	.030	INDH=.248 p=.035; INDL=.440 p=.000
EL-EL*LMXD -> SL->TC	2*2-2	-.250	.093	-2.684	.007	DIFF (ind_h - ind_l)=-.192 p=.028

<Table 17>The Moderated Mediation Effect of EL->SL->IC (Multilevel)

Path	level	Estimate	SE	t	p	Model information
Gender-IC	1-1	.018	.069	.262	.793	
Position-IC	1-1	-.151	.035	-4.352	.000	
Team tenue-IC	1-1	.027	.014	1.958	.050	
Team size-IC	2-1	-.067	.019	-3.575	.000	CFA=1.000 TLI=1.000 X^2=73.694(.000)
Leader gender-IC	2-1	.041	.036	1.139	.255	$SRMR_w$=.001 $SRMR_b$=.007
Leader position-IC	2-1	.024	.095	4.480	.603	AIC=338.417
Leader tenue-IC	2-1	.009	.014	.663	.507	BIC=341.513
EL-IC	1-1	.409	.072	5.673	.000	
EL-IC	2-1	.276	.163	1.692	.091	
EL-SL	1-1	.337	.085	3.987	.000	CFA=1.000 TLI=1.000 X^2=47.994(.000)
SL-IC	1-1	.375	.134	2.795	.005	$SRMR_w$=.000 $SRMR_b$=.001
EL-IC	1-1	.085	.082	1.032	.302	AIC=1274.713
EL-SL-IC	1-1-1	.126	.050	2.551	.011	BIC=1326.479
EL-SL	1-2	.750	.198	3.790	.000	CFA=1.000 TLI=1.000 X^2=18.302(.001)
EL-IC	1-1	.215	.081	2.658	.008	$SRMR_w$=.000 $SRMR_b$=.001
SL-IC	2-1	.212	.478	.443	.658	AIC=950.657
EL-SL-IC	1-2-1	.159	.366	.434	.665	BIC=995.070
EL-SL	2-2	.634	.140	4.547	.000	CFA=1.000 TLI=1.064 X^2=77.246(.001)
EL-IC	2-1	.096	.078	1.236	.216	$SRMR_w$=.004 $SRMR_b$=.026
SL-IC	2-1	.184	.315	.586	.558	AIC=1266.948
EL-SL-IC	2-2-1	.117	.203	.576	.565	BIC=1304.910
LMXD->SL	2-1	-.303	.486	-.62	.533	INDH=.108 p=.025; INDL=.218 p=.012
EL-EL*LMXD -> SL->IC	2*1-2-1	-.713	.261	-2.732	.006	DIFF (ind_h - ind_l)=-.110 p=.031

<Table 18> Direct and Indirect Effect of Moderated Mediation Models

IV	Mediator	Moderator	DV	Level of	Effect	SE	LLCI	ULCI
Direct effect (MSEM 2*1-2-2)								
Ethical leadership→Team creativity					.492	.028	.421	.581
Conditional indirect effects								
Ethical leadership	Shared leadership	LMXD	Team creativity	Low	.690	.099	.525	.847
				High	.191	.119	.004	.393
				Diff(H-L)	-.499	.192	-.804	-.170
Direct effect (MSEM 2*2-2-2)								
Ethical leadership→Team creativity					.263	.028	.208	.332
Conditional indirect effects								
Ethical leadership	Shared leadership	LMXD	Team creativity	Low	.479	.048	.404	.559
				High	.402	.061	.302	.503
				Diff (H-L)	-.077	.035	-.132	-.017
Direct effect (MSEM 2*1-2-1)								
Ethical leadership→Member creativity					.138	.055	.072	.225
Conditional indirect effects								
Ethical leadership	Shared leadership	LMXD	Member creativity	Low	.218	.086	.075	.360
				High	.108	.055	.029	.187
				Diff(H-L)	-.110	.054	-.198	-.021

Bootstraps n=5000
Level of confidence intervals=95%
IV=independent variable; DV=dependent variable

<div align="center"><Table 19> List of Hypotheses Result</div>

H	Details	Results	Detail
H1	EL→SL (+)	Accepted	Cross level recognized
H2	EL→IC (+)	Partially accepted	Individual level recognized
H3	EL→TC (+)	Accepted	Cross level recognized
H4	SL→IC(+)	Rejected	
H5	SL→ TC (+)	Accepted	
H6	EL→SL→IC	Rejected	
H7	EL→SL→TC	Accepted	Partial mediation TEL->SL->TC Full mediation IEL->SL->TC
H8	LMXD*EL→SL	Accepted	Cross level recognized (-)
H9	LMXD* EL→SL→IC	Accepted	
H10	LMXD*EL→SL→ TC	Accepted	

TEL=team level ethical leadership;

IEL=individual perceived ethical leadership

CHAPTER 6: Discussion & Conclusion

This study is prior ahead to examining the vertical and shared leadership through the IPO model with the interaction effect of LMXD on the relationship. To discuss the catalytic agent mechanism of shared leadership, we made contributions to the fruitful research area of ethical leadership and shared leadership. Moreover, this study suggested that additional antecedence, moderating, and mediating indicators expand the nomological networks of the various multilevel creativity constructs. This study offered a piece of empirical findings to address the confusion in operationalization in the leadership and creativity literature through the multilevel moderated mediation model. The results suggested that team leaders trying to create conditions where team

members participate in shared leadership may be wise to consider LMXD patterns, affecting both member and team creativity.

1. Theoretical Implication

The research result is concluded in <Table 19>. Before estimating, this study's settled goals are ambitious to add the several recent calls for research. Firstly, we concern about the effectiveness of ethical leadership. The study recognized that ethical leadership accounts for multilevel creativity. The topic of ethical leadership and creativity has been getting attention and explore for long years. Our study developed an innovative new mechanism and offered an alternative explanation for how and when ethical leadership contributes to creativity. The study investigates ethical leadership's effect on creativity at the individual and team level and extends previous studies conducted at the single level. This study found that team members' perceived team leaders' ethical leadership and team-level aggerated ethical leadership are positively related to team creativity. However, only team members perceived team leaders' ethical leadership positively affected individual team member creativity. This study may provide an example for the solution to extend the boundaries of ethical leadership (Quade et al., 2019). We think about the "role" the leader wants to promote or train the employee to play, which is the crucial facet of ethical leadership.

Second, this study followed the research suggestion by Ensley et al. (2006) and Pearce (2004) to expand the understanding of the relationship and interaction between vertical and shared leadership. From what we know, when focusing on shared

leadership development, this is the advanced study that presented vertical ethical leadership with shared leadership at a horizontal causality model with the conditional effect. Our study integrated ethical leadership with shared leadership based on the role theory perspective. This study has taken precedence to propose ethical leadership as the antecedent of shared leadership. The result proved that individual and group perception of ethical leadership could effectively promote the generation of shared leadership at the team. The finding suggested that vertical ethical leadership as an antecedent condition can stimulate shared leadership in a team. We also add the interaction effect on this influence, try to have a clue when ethical leadership best facilitates shared leadership, thereby exacerbating the evidence in the statement that vertical and shared leadership are auxiliary and complementary (Ensley et al., 2006; Pearce, 2004, 2007). Moreover, since prior studies have investigated the shared leadership positively related to creativity, the result of this study was consistent. Still, we offered shared leadership direct and indirect paths to team creativity additionally.

Third, the results also extend the understanding of the literature on creativity. This study not only demonstrated leadership as the driving force for multilevel creativity. Moreover, shared leadership showed a powerful mediating effect on the mechanism through ethical leadership to creativity. Ethical leadership contributed directly to team creativity, while shared leadership contributed much than ethical leadership. This study also provides additional validation for the research topic of

shared leadership and creativity, and shared leadership has a strong effect on team creativity.

Finally, this study proposes LMXD as a contingency factor that can diminish ethical leadership's effects on shared leadership and consequence creativity at the team and individual level. The interplay between two leadership properties in erupting creativity can offer theoretical and practical insights. The finding on the moderating effect of LMXD is beyond expectation. This study followed the command that research should embrace the perspective that simultaneously considering the paradox of LMXD (Yu et al., 2018), the impacts of ethical leadership on shared leadership will be mitigated by high LMXD because of "inequality," this study provided an interesting case to discuss the phenomenon of LMXD at the team-level.

2. Practical Implication

Accordingly, this study makes several contributions to practitioners. First, team leaders should avoid unethical behavior. We believe the concern on ethical leadership will continue for several generations of the importance of ethics. Leaders and managers should engage themselves in ethical leadership behavior as early as possible. Through ethical efforts, not individual member creativity but also team creativity will be developed, and the higher level seems like positive organizational outcomes could be near at hand. What is more, ethical leadership creates equality organizational

environment by setting role models and sharing common goals is a platform for leadership to adapt to the changing times.

Second, we suggest that team leaders encourage and empower supervisors to adaptively take the role of leadership is necessary. It is critical to set the foundation that ethical leaders leading their followers feel trusted and involved. Members may participate in decision-making and even have more opportunities to exercise leadership. Ethical leadership could contribute to cultivating members in the role taking-making process. Once a member takes the role and makes a role under a moral model and sharing goals, optimistic individual, and team performance can be expected.

On the other hand, the evolution and sustainable development of shared leadership requires vertical leadership (Pearce, 2004). Scholars (Hsu, Li, & Sun, 2017) argued that vertical leadership should consider the different leadership resources, such as external stakeholders, how to integrate resources. Typically, the way to coordinate internal and external resources is the message for leaders.

Fourth, team leaders should think about ensuring that a suitable balance is maintained in their workplace relationship. The exchange between leaders and members is a dynamic across-level complex process (Graen & Uhl-Bien, 1995). As suggested by scholars (Yu et al., 2018), depending on the situation of perspective or behavior, the differentiation on LMXD can judge to supposition or devastation. Team leaders may increase the targeted training or particularly encourage and reward behavior for excellent members after observing that shared leadership is working in a

team. Similarly, scholars suggested shared leadership will be an alternative solution to tap talented leader candidates (Kocolowski, 2010). Therefore, both ethical and shared leadership are priority matters for human resource development.

Moreover, leaders are also advised to focus on the quality and quantity of creativity, precisely, team creativity and individual member creativity. Shared leadership may improve team whole creativity but may result to increasing individual creativity and widening the gap between team member performance. Leaders must increase member creativity by encouraging and inviting all members to participate in the creative process to maximize creative performance and fully utilize intrateam resources.

3. Limitation and Future Research

We censured and discussed the limitations of this study as follows. First, the limited sample size of our study may result in bias. It is regrettable that this paper fails to prove the cross-level effect of ethical leadership and shared leadership on individual creativity. Even though the sample quality is high and targeted for the research subject, the disadvantage of small samples should be concerned. This study utilized *M*plus and required the sample size for multilevel analysis. 50 groups sample is a frequently occurring number in organizational and school research (Maas & Hox, 2005), and 30 is the smallest acceptable number (Kreft & De Leeuw, 1998). Similarly, the group sizes are chosen so that the highest number should be sufficient, more cases may be needed for convergence if the model is more complex.

Another limitation is on respondent's identification, HRDK as a part of public administration of government, compared with service work, innovation and knowledge work is less critical in perspectival. Moreover, this study was conducted in business and academic settings. As such, it is necessary to replicate the study with additional samplings drawn from other professions that might serve as sports, high-tech enterprise, and educational fields.

Third, since we were interested in examining the mechanism between vertical ethical and shared leadership, this study adopted a self-reported scale, which checked if shared leadership sparks by ethical leaders from the angle of team members' view. Some scholars remarked that the operationalization measurement based on the social network approach is more appropriate for explaining the team-level leadership concept (Pearce, 2007). In this way, we suggest the future study considering shared leadership network change over time. Another similar potential limitation is the operationalization of LMXD. Even the statistical indices were preference by scholars (Buengeler, Piccolo, & Locklear, 2021), the process measurement of LMXD may controversial.

Moreover, this study basically draws on role theory to link vertical and shared leadership, but we did not directly measure variables regarding role modeling. This study proved the value of taking them into consideration to learn more about the potential influence mechanism of ethical leadership to shared leadership.

Noticed that diversity as a latent factor may lead to future research of vertical and shared leadership relationships, this study has advanced by acknowledging that the

"differentiation" in relationship influences the ethical leaders' effect of shared leadership and multilevel creativity differently depending on the process situation. While our findings help clarify the contradictions in leader-member exchange, the heterogeneity about the result of LMXD remains investigated. Therefore, this study further commands researchers to draw upon allocation preferences theory (Leventhal, 1976) and other related approaches to take the avenue on the influence of diversity and differentiation on vertical and shared leadership interaction.

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Abstract in Korean

윤리적 리더십과 창의성 간의 관계에서 공유리더십과 LMX 차별화의 역할에
관한 연구

울산대학교
일반대학원
경영학과
왕 각

본 논문은 팀 리더의 윤리적 리더십이 팀 멤버의 개인 창의성/팀 창의성 과
원칙 뿐 아니라, 개인 창의성/팀 창의성에 영향을 끼 치는지에 대한 궁금증에서
시작되었다. 그리고, 윤리적 리더십이 팀 멤버의 개인 창의성/팀 창의성에
영향을 주게 된다면, 어떤 메커니즘을 통해 영향을 주는지 연구하고자 하였다.
이를 위해, 윤리적 리더십, 팀 멤버의 개인 창의성/팀 창의성, 공유리더십,
LMX 차별화 등과 관련된 기존 연구를 기반으로 아래와 같은 주요 가설을
수립하였고, HRDK 총 30 팀 중에 233 부의 설문지를 분석에 사용하였으며
SPSS 25.0 과 Mplus 8.0 을 사용하여 설문 자료를 분석하였다.
첫째, 윤리적 리더십은 공유리더십의에 긍정적인 영향을 줄 것이다.
둘째, 윤리적 리더십은 팀 멤버의 개인 창의성에 긍정적인 영향을 줄 것이다.
셋째, 윤리적 리더십은 팀 창의성에 긍정적인 영향을 줄 것이다.
넷째, 공유리더십은 팀 멤버의 개인 창의성에 긍정적인 영향을 줄 것이다.
다섯째, 공유리더십은 팀 창의성에 긍정적인 영향을 줄 것이다.
여섯째, 공유리더십은 윤리적 리더십과 팀 멤버의 개인 창의성의 관계를
매개할 것이다.
일곱째, 공유리더십은 윤리적 리더십과 팀 창의성의 관계를 매개할 것이다.
여덟째, LMX 차별화는 윤리적 리더십과 공유리더십의 관계를 조절할 것이다.
뿐만 아니라, 아홉 째와 열째 가설은 윤리적 리더십과 팀 멤버의 개인
창의성/팀 창의성 간의 관계에서 공유리더십의 매개 효과에 대한 LMX
차별화의 조절된 매개 효과를 분석하였다.

Appendix 1: Table List

Appendix 2: Figure List

Appendix 3: Team Member Questionnaire

안녕하십니까.

귀중한 시간을 내어 주셔서 감사합니다.

본 설문은 윤리적 리더십이 공유 리더십과 팀 창의성에 영향을 미치는 요인들을 알아보고자 작성되었습니다.

귀하께서 응답하신 내용은 오직 연구의 목적으로만 사용될 것이며 조사 및 분석 과정은 익명으로 처리되기 때문에 특정 개인이나 기업의 특성은 절대로 노출되지 않을 것을 약속 드립니다.

바쁘신 중에 끝까지 진지하게 해주신 응답은 혁신 행동 촉진의 이론적 기여 뿐만 아니라 기업의 혁신활동에도 실질적 도움이 될 수 있을 것입니다. 원하시는 경우에는 연구 결과를 공유하도록 약속 드리겠습니다. 작성 시간은 약 15 분 정도 소요됩니다. 다시 한 번 진지한 응답에 감사드리며, 귀사의 발전을 기원합니다.

※설문지 예제
아래의 예제와 같은 경우 다음과 같이 답변해 주시면 되겠습니다.

문항 예제	전혀 그렇지 않다	그렇지 않다	보통	그렇다	매우 그렇다
해는 동쪽에서 뜬다	1	2	3	4	5

* 위의 문항에 대해 전혀 동의하지 않으면 1 에, 완전히 동의하면 5 에 표시하고, 동의 하는 경우에는 4 에 표시해 주십시오.

* 본 설문지에서 언급되는 '팀'은 현재 귀하의 주요 업무가 진행되는 소집단(예: 팀, 파트, 실, 반, 라인, 기타 호칭)을 의미합니다.

2020 년 10 월

울산대학교 경영대학원 인사조직 전공
지도교수 : 김 해룡 교수

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※ 본 조사의 내용은 통계법 제 13 조에 의거하여 비밀이 보장되며 통계적 목적 이외에는 사용 되지 않습니다.

I. 다음은 소속된 팀 내의 윤리적 리더십에 관한 것입니다. 아래 내용을 잘 읽으시고 귀하께서 느끼시는 바를 가장 잘 나타내는 숫자에 체크 '√' 표를 해주시기 바랍니다.

설문 문항	전혀 그렇지 않다	그렇지 않다	보통	그렇다	매우 그렇다
1. 나의 팀장은 구성원들이 말하는 것을 잘 경청한다.	1	2	3	4	5
2. 나의 팀장은 윤리적 기준을 위반한 사람들을 잘 통제한다.	1	2	3	4	5
3. 나의 팀장은 윤리적 실천으로 개인적 삶을 영위한다.	1	2	3	4	5
4. 나의 팀장은 구성원들의 관심을 가장 먼저 염두에 둔다.	1	2	3	4	5
5. 나의 팀장은 공정하고 균형 잡힌 의사결정을 한다.	1	2	3	4	5
6. 나의 팀장은 신뢰할 수 있다.	1	2	3	4	5
7. 나의 팀장은 구성원들과 윤리 혹은 가치에 대하여 토론한다.	1	2	3	4	5
8. 나의 팀장은 윤리적 관점에서 올바른 방식에 대한 사례를 정립한다.	1	2	3	4	5
9. 나의 팀장은 단지 결과 뿐 만 아니라, 과정에서의 성공도 매우 중요하게 생각한다.	1	2	3	4	5
10. 나의 팀장은 의사결정을 할 때에는 "무엇이 옳은 것인가?"를 질문한다.	1	2	3	4	5

II. 다음은 소속된 팀 내의 리더-구성원 교환관계(LMX)에 관한 것입니다. 아래 내용을 잘 읽으시고 귀하께서 느끼시는 바를 가장 잘 나타내는 숫자에 체크 '√' 표를 해주시기 바랍니다.

설문 문항	전혀 그렇지 않다	그렇지 않다	보통	그렇다	매우 그렇다
1. 나는 팀장이 내가 하는 일에 얼마나 만족 하는지 알고 있다.	1	2	3	4	5
2. 나의 팀장은 업무상 내가 겪은 문제와 필요로 하는 바를 잘 이해하고 있다.	1	2	3	4	5
3. 나의 팀장은 나의 잠재력을 잘 알고 있다.	1	2	3	4	5
4. 나의 팀장은 업무상 발생된 문제점들을 해결하기 위해 자신의 권한을 사용해서라도 나를 도와줄 의향이 있다.	1	2	3	4	5
5. 팀장은 내가 어려움에 처해 있을 때 자신의 손해를 감수해서라도 나를 도와줄 의향이 있다.	1	2	3	4	5
6. 팀장이 결정한 일이 실제 진행되지 않더라도 상사의 의사결정사항을 옹호하고 정당화 할 만큼 충분히 신뢰한다.	1	2	3	4	5

설문 문항					
7. 나와 팀장은 효과적인 업무관계를 형성하고 있다.	1	2	3	4	5

IV. 다음은 소속된 팀 내의 공유리더십에 관한 것입니다. 아래 내용을 잘 읽으시고 귀하께서 느끼시는 바를 가장 잘 나타내는 숫자에 체크 '√' 표를 해주시기 바랍니다.

설문 문항	전혀 그렇지 않다	그렇지 않다	보통	그렇다	매우 그렇다
1. 우리 팀는 함께 업무가 원활히 흘러갈 수 있도록 업무를 조정한다.	1	2	3	4	5
2. 우리 팀은 함께 팀의 업무를 어떤 식으로 해나갈 것인지에 대해 정한다.	1	2	3	4	5
3. 우리 팀은 함께 팀의 전체적인 업무 계획에 대한 유용한 의견을 제시한다.	1	2	3	4	5
4. 우리 팀은 함께 팀의 업무 완수를 위한 계획을 수립한다.	1	2	3	4	5
5. 우리 팀은 함께 업무 우선순위에 따라 필요 자원을 배분한다.	1	2	3	4	5
6. 우리 팀은 함께 팀의 목표를 수립한다.	1	2	3	4	5
7. 우리 팀은 함께 당면한 문제를 빠르게 분석한다.	1	2	3	4	5
8. 우리 팀은 함께 문제 해결을 위하여 팀 전체의 전문성을 활용한다.	1	2	3	4	5
9. 우리 팀은 함께 팀 성과에 영향을 끼칠 문제들에 대한 대안을 모색한다.	1	2	3	4	5
10. 우리 팀은 함께 문제 발생 시 최적의 대응 방안을 결정한다.	1	2	3	4	5
11. 우리 팀은 문제가 발생하기 전에 미리 파악한다.	1	2	3	4	5
12. 우리 팀은 함께 문제에 대한 해결 방안을 개발한다.	1	2	3	4	5
13. 우리 팀은 함께 문제가 발생하면 이를 해결한다.	1	2	3	4	5
14. 우리 팀은 팀 구성원들에 대해 참을성 있게 대한다.	1	2	3	4	5
15. 우리 팀은 팀 구성원이 화가 났거나 기분이 안 좋을 때 격려해준다.	1	2	3	4	5
16. 우리 팀은 함께 서로 뭉칠 수 있는 팀 분위기를 조성한다.	1	2	3	4	5

설문 문항					
17. 우리 팀은 함께 도움이 필요한 구성원에게 지원을 제공한다.	1	2	3	4	5
18. 우리 팀은 팀 구성원들의 불만과 문제를 경청한다.	1	2	3	4	5
19. 우리 팀은 상호간에 예의를 갖춰 대한다.	1	2	3	4	5
20. 우리 팀은 다른 구성원들이 스킬(skill)을 배양할 수 있도록 돕는다.	1	2	3	4	5
21. 우리 팀은 다른 구성원으로부터 업무 스킬(skill)을 배운다.	1	2	3	4	5
22. 우리 팀은 다른 구성원들이 새로운 스킬을 배울 때 도와준다.	1	2	3	4	5
23. 우리 팀은 구성원들 간 경력과 관련된 조언을 공유한다.	1	2	3	4	5
24. 우리 팀은 새로운 팀 구성원에게 긍정적인 롤 모델로서 역할을 수행한다.	1	2	3	4	5
25. 우리 팀은 성과가 저조한 구성원에게 어떻게 개선해야 하는지 지도한다.	1	2	3	4	5

V. 다음은 개인 창의성에 관한 것입니다. 아래 내용을 잘 읽으시고 귀하께서 느끼시는 바를 가장 잘 나타내는 숫자에 체크 '√' 표를 해주시기 바랍니다.

설문 문항	전혀 그렇지 않다	그렇지 않다	보통	그렇다	매우 그렇다
1. 나는 성과를 높이기 위해 새롭고 실질적인 아이디어를 내놓는다.	1	2	3	4	5
2. 나는 새로운 기술, 절차, 기법 그리고(또는) 아이디어를 적극적으로 찾는다.	1	2	3	4	5
3. 나는 위험을 무릅쓰기 주저하지 않는다.	1	2	3	4	5
4. 나는 종종 새롭고 혁신적인 아이디어를 낸다.	1	2	3	4	5
5. 나는 문제에 대한 창의적인 해결책을 적극적으로 찾는다.	1	2	3	4	5
6. 나는 종종 문제에 대한 새로운 접근을 한다.	1	2	3	4	5

VII. 다음은 소속된 팀의 특성 및 인적 구성 등에 대한 질문입니다. 본 연구에서 매우 중요한 자료가 되오니, 반드시 기입을 부탁드립니다.

1	성별	①남　　②여
2	연령(만)	만_____세
3	직위	①사원　②대리　③과장　④차장 또는 부장　　　⑤그 이상
4	현 부서(팀)에서의 근속년수	_____년
5	현 직장에서의 입사 년도	_____년
6	학력	①고졸　②전문대졸　③대졸　④대학원졸 이상
7	귀하께서 현재 담당하고 계시는 업무는 무엇입니까? _____ 예:①연구, 개발　②기술(지원)　③전략 및 일반기획　④인사, 총무, 법무 ⑤구매, 자재　⑥홍보　　⑦영업, 마케팅　　⑧기타(　　　　)	

- 설문에 응답해 주셔서 진심으로 감사드립니다 –

안녕하십니까.

귀중한 시간을 내어 주셔서 감사합니다.

본 설문은 윤리적 리더십이 공유 리더십과 팀 창의성에 영향을 미치는 요인들을 알아보고자 작성되었습니다.

귀하께서 응답하신 내용은 오직 연구의 목적으로만 사용될 것이며 조사 및 분석 과정은 익명으로 처리되기 때문에 특정 개인이나 기업의 특성은 절대로 노출되지 않을 것을 약속 드립니다.

바쁘신 중에 끝까지 진지하게 해주신 응답은 혁신 행동 촉진의 이론적 기여 뿐만 아니라 기업의 혁신활동에도 실질적 도움이 될 수 있을 것입니다. 원하시는 경우에는 연구 결과를 공유하도록 약속 드리겠습니다. 작성 시간은 약 5분 정도 소요됩니다. 다시 한 번 진지한 응답에 감사드리며, 귀사의 발전을 기원합니다.
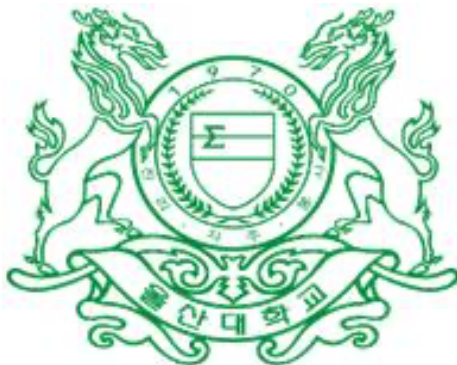
※설문지 예제
아래의 예제와 같은 경우 다음과 같이 답변해 주시면 되겠습니다.

문항 예제	전혀 그렇지 않다	그렇지 않다	보통	그렇다	매우 그렇다
해는 동쪽에서 뜬다	1	2	3	4	5

* 위의 문항에 대해 전혀 동의하지 않으면 1에, 완전히 동의하면 5에 표시하고, 동의 하는 경우에는 4에 표시해 주십시오.

* 본 설문지에서 언급되는 "팀"은 현재 귀하의 주요 업무가 진행되는 소집단(예: 팀, 파트, 실, 반, 라인, 기타 호칭)을 의미합니다.

2020년 10월

울산대학교 경영대학원 인사조직 전공
지도교수 : 김 해룡 교수

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I. 다음은 소속된 팀의 창의성에 관한 것입니다. 아래 내용을 잘 읽으시고 귀하께서 느끼시는 바를 가장 잘 나타내는 숫자에 체크 '√' 표를 해주시기 바랍니다.

설문 문항	전혀 그렇지 않다	그렇지 않다	보통	그렇다	매우 그렇다
1. 우리 팀은 목표를 달성하기 위하여 새로운 방법을 제시하는 편이다.	1	2	3	4	5
2. 우리 팀은 성과를 향상시키기 위해 새롭고 실질적인 방안을 제안하는 편이다.	1	2	3	4	5
3. 우리 팀은 새로운 기술, 절차, 기법이나 제품 아이디어를 꾸준히 탐색한다.	1	2	3	4	5
4. 우리 (업무)품질을 개선하기 위해 새로운 방법을 제안하는 편이다.	1	2	3	4	5
5. 우리 팀은 창의적인 아이디어의 정보원(source)을 가지고 있다.	1	2	3	4	5
6. 우리 팀은 새로운 아이디어의 리스크에 대해 별로 두려워하지 않는다.	1	2	3	4	5
7. 우리 팀은 새로운 아이디어에 다른 사람들을 동참시키려고 노력한다.	1	2	3	4	5
8. 우리 팀은 기회가 되면 새로운 아이디어를 업무에 적용한다.	1	2	3	4	5
9. 우리 팀은 새로운 아이디어를 실행하기 위해 적절한 계획과 일정을 수립하는 편이다.	1	2	3	4	5
10. 우리 팀은 새롭고 혁신적인 아이디어가 있다.	1	2	3	4	5
11. 우리 팀은 문제 해결을 위해 새로운 아이디어를 자주 제시하는 편이다.	1	2	3	4	5
12. 우리 팀은 문제에 대해 새로운 접근을 하는 편이다.	1	2	3	4	5
13. 우리 팀은 업무를 수행할 때 새로운 방식을 적용할 수 있도록 자주 제안하는 편이다.	1	2	3	4	5

II. 다음은 귀 팀의 '기본 정보'에 대한 질문입니다. 본 연구에서 매우 중요한 자료가 되오니, 반드시 기입을 부탁드립니다.

1	현 부서(팀) 인원 수	_____명
2	현 부서(팀) 명	_____

IV. 다음은 귀 팀의 '팀 특성 및 인적 구성 등'에 대한 질문입니다. 본 연구에서 매우 중요한 자료가 되오니, 반드시 기입을 부탁드립니다.

1	성별	①남 ②여
2	연령(만)	만_____세
3	직위	①사원 ②대리 ③과장 ④차장 또는 부장 ⑤그 이상
4	현 부서(팀)에서의 근속년수	_____년
5	현 직장에서의 입사 년도	_____년
6	학력	①고졸 ②전문대졸 ③대졸 ④대학원졸 이상
7	귀하께서 현재 담당하고 계시는 업무는 무엇입니까? _____ 예: ①연구, 개발 ②기술 (지원) ③전략 및 일반기획 ④인사, 총무, 법무 　　　⑤구매, 자재 ⑥홍보 ⑦영업, 마케팅 ⑧기타 ( )	

- 설문에 응답해 주셔서 진심으로 감사드립니다 –