

**CAPITAL UNIVERSITY OF SCIENCE AND
TECHNOLOGY, ISLAMABAD**



**Antecedents and Outcomes of LMX Ambivalence
on Individual and Team Level Innovation and
Creativity: Developing a Multilevel Model**

by

Gulfam Murtaza

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**Antecedents and Outcomes of LMX Ambivalence on
Individual and Team Level Innovation and Creativity:
Developing a Multilevel Model**

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Dedicated to my beloved father

Ghulam Murtaza

and my loving mother (Late)



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List of Publications

It is certified that following publication(s) have been made out of the research work that has been carried out for this dissertation:-

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Abstract

Ambivalence is inevitable in all close relations, especially in the organizational environment but has been recently recognized in management literature. The study aimed to enhance the literature on dyadic ambivalence and leader's paradoxes by exploring their positive outcomes as innovation and creativity through mediating and moderating mechanisms. The study presents a multilevel investigation of LMX ambivalence from a dyadic perspective. The study explores paradoxical leadership (PL) as an antecedent whereas innovative work behaviors (IWB) and team creativity as positive outcomes of LMX ambivalence. The link between PL and IWB is mediated by LMX ambivalence and negative affective tone, whereas mindfulness moderates between LMX ambivalence and negative affective as well as negative affective tone and IWB relationships. The study also proposes paradoxical leadership influences team creativity through mediating mechanism of LMX ambivalence and negative affective tone. Team level mindfulness moderates between PL and negative affective tone and negative affective tone and team creativity relationships. Data were collected from different software houses in Pakistan. Almost 541 software development team members and 103 team leaders (supervisors) responded to different variables of the study. As the nature of the study was multilevel so team members were nested under their respective supervisors. The study employed SPSS, and MPlus softwares for data analysis. Simple and cross level CFA's, correlations and regressions were computed using MPlus 7 software. The results, by and large, supported the different hypotheses of the study. PL was positively associated with LMX ambivalence and IWB. LMX ambivalence was positively related to negative affective tone, IWB and team creativity. Whereas negative affective tone was negatively associated with IWB. LMX ambivalence mediated between PL and IWB relationship. Negative affective tone mediated between LMX ambivalence and IWB link. Individual level mindfulness moderated the relationships between LMX ambivalence and negative affective tone. The study did not confirm the mediating role of negative affective tone between PL and team creativity. Furthermore, team-level mindfulness moderated between PL and negative affective tone but no moderation was found between negative affective

tone-team and creativity relationship. These findings are in line with the propositions of Affective Event Theory (AET). The findings also offer theoretical and practical implications.

Key words: LMX Ambivalence, Paradoxical Leadership, Negative Affective Tone, Innovative Work Behavior, Individual Level Mindfulness, Team Level Mindfulness, Team Creativity.

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Abbreviations

AET	Affective Event Theory
CFA	Confirmatory Factor Analysis
CFI	Comparative Fit Index
DF	Degree of Freedom
EFA	Exploratory Factor Analysis
IFI	Incremental Fit Index
IM	Individual Level Mindfulness
IWB	Innovative Work Behavior
LMX	Leader Member Exchange
LMXA	LMX Ambivalence
NAT	Negative Affective Tone
PAT	Positive Affective Tone
PL	Paradoxical leadership
RMSEA	Root Mean Square Error of Approximation
SRMR	Standardized Root Mean Squared Residual
TC	Team Creativity
TLI	Tucker-Lewis Index
TM	Team Level Mindfulness

Chapter 1

Introduction

This chapter details the background, problem statement, research questions, research objectives, and an underpinning theory for explaining relationships between different variables. The current dissertation attempts to measure the impact of paradoxical leadership (PL) and LMX ambivalence on IWB and team creativity via mediating and moderating mechanisms.

1.1 Background

“Ambivalence is a wonderful tune to dance to. It has a rhythm all its own.” Erica Jong

Early reflections on ambivalence have been echoed from the Platonian and Aristotelian periods. Ambivalence, afterward, has been defined by scholars as “the simultaneous experience of both positive and negative orientations (emotions or cognition) toward a person, object, situation, task, goal, or idea,” which creates feelings of conflict and tension (Ashforth, Rogers, Pratt, & Pradies, 2014). Despite long-standing contributions in this area of inquiry, ambivalence has recently emerged in management literature. It is considered “more the norm than the exception in organizations” (Rothman, Pratt, Rees, & Vogus, 2017). In recent years, ambivalence has surfaced in different management disciplines, including organizational behavior, strategy, theory, etc (Rothman et al., 2017).

Ambivalence arises from contradictions, so its presence in organizations is no surprise, given that individuals constantly balance contradictory demands in their work environment (Schrage & Rasche, 2022). At the individual level, organizational members must manage complex relationships with their peers, bosses, customers, apprentices, etc. For instance, employees tolerate difficult bosses but show care as well, similarly managing their colleagues as friends and competitors (Methot & Rosado-Solomon, 2019). At the group level, every member has to maintain a personal identity while observing group identification (Pattnaik & Tripathy, 2020). At the organizational level, managers and subordinates must balance different contradictions such as cooperation and competition, stability and changes, flexibility and structure, growth and stability, etc. (Ragazou, Passas, Garefalakis, & Dimou, 2022). These contradictions produce opposing emotions and attitudes in straight lines and across boundaries, resulting in ambivalent experiences.

Dominant literature has so far claimed different types of ambivalence, including “emotional ambivalence (mixed feelings),” “attitudinal ambivalence,” “trait ambivalence,” “relational ambivalence,” and “expressed ambivalence.” Still, the spotlight has remained on its emotional, attitudinal, and relational variants (Rothman et al., 2017). Emotional ambivalence simultaneously deals with strong positive and negative emotional experiences about an object, person, situation, symbol, or idea (Rees, Rothman, Lehavy, & Sanchez-Burks, 2013). Attitudinal ambivalence, on the other hand, is derived from intense positive and negative thoughts and positions toward an object (Van Harreveld, Nohlen, & Schneider, 2015). Relational ambivalence, according to Uchino, Holt-Lunstad, Uno, and Flinders (2001), refers to the perceptions of a network member as a source of ambivalence. Studies suggest that relationships are more prone to ambivalence than all other types (Methot, Melwani, & Rothman, 2017).

Organizations are the embodiment of individuals having different capabilities and skills. Diversity is considered an important ingredient of success in today’s turbulent environment. People from different ethnic and cultural backgrounds are tied up in the organizational vision, mission, values, regulations, and environment. Research suggests 50 percent of relationships are ambivalent (Campo et al., 2009), and organizations are no exceptions, where employees form different

relationships such as peer-to-peer, trainer-trainee, supervisor-subordinate, leader-follower relationships, etc. Among these relations, the leader-follower relationship is highly influential. Leaders hold important resources, have the authority to hire and fire, and hence have great control over subordinates. So negative and positive orientations toward the leader occurring simultaneously are no longer surprising. Generally, two approaches have been discussed in the literature to fix the broad repertoire of leader-follower relationships. Either the leader is task-oriented or people-oriented. A task-oriented leader structures the role of followers with a good deal of instruction and expects their behaviors to follow the leader's instructions to achieve performance goals. On the other hand, a people-oriented leader shows concern and respect for followers and generally cares for their wellbeing. Following these two orientations, ample research has surfaced that motivation and satisfaction with the leader are important mechanisms for explaining followers' performance outcomes associated with leadership behavior ([Gottfredson & Aguinis, 2017](#)).

Studies suggest that leadership behaviors evolve along the task-oriented and people-oriented continuum. The situation and personality disposition of the leader decide the extent to which the leader's behavior tilts towards task orientation or relation orientation on the continuum ([Vandewalle, Nerstad, & Dysvik, 2019](#)). Due to massive globalization, technological changes, and the complex demands of the environment, boundaries between task-oriented and people-oriented behaviors are blurred, and now this complexity of the environment demands to and fro movement between different leadership styles. For instance, leaders have to give liberty to their followers to bring new ideas and solutions to daily problems while stressing rules and roles to achieve performance goals. These dualities drive followers to simultaneously feel high and low-quality relationships with the leader. The follower's experience of these mixed feelings is termed as relational ambivalence (more specifically, LMX ambivalence).

The literature proposes that leaders form either high- or low-quality relationships with followers called the "leader-member exchange" (LMX) relationship ([Graen & Uhl-Bien, 1995](#)). LMX provides robust insight into the leader-follower dyadic relationship and suggests that a high-quality relationship with the leader is described

by a high level of loyalty, mutual respect, and trust (Bauer, Erdogan, Liden, & Wayne, 2006). Followers in this relationship are expected to show extra-role behaviors. While in contrast, followers in low-quality relationships are limited to contractual exchanges, experience limited emotional support with few benefits, and are prone to supervisory incivility (Thompson, Buch, & Glasø, 2018). Prior studies also revealed that LMX affected employees' job satisfaction, task commitment, task performance, helping behavior, job satisfaction, turnover intention, and IWB (Gerstner & Day, 1997).

The extant research implies LMX quality as a univalent concept that follows “either high-quality or low-quality LMX” while missing the possibility of “both high-quality and low-quality LMX experiences” in leader-follower relations. Literature reveals that high-quality LMX has strong positive, and low-quality LMX negatively affects employees' behaviors and performance. The question arises: can this very significant relationship be bivalent? Lee and his colleagues established that LMX might be bivalent by nature, having high and low-quality relations simultaneously, which is called LMX ambivalence (Lee, Thomas, Geoff, et al., 2019). These scholars define LMX ambivalence as “a leader-follower relationship that is subjectively evaluated as being made up of both positive and negative cognitions, involving relational and attitudinal perspectives.” These researchers rely on the subjective experience (intensity) of LMX ambivalence rather than objective ambivalence (i.e., the existence of opposing cognitions). With its new perspective on LMX, this pioneering study has changed the literature debate and compelled us to make it the central theme of our dissertation.

In management literature, research on ambivalence is embryonic, and little is known about its antecedents and consequences. This is why a continuous call for further investigation is streamlined by many organizational researchers (for instance, (Rothman et al., 2017; Ashforth et al., 2014)). Moreover, in the case of relational ambivalence, the concentration of studies is still more dilute, although relationships constitute most of the part of organizations. So, this study is undertaking LMX ambivalence from the relational perspective of ambivalence. In this way, the study responds to calls from esteemed scholars who emphasize deep digging into the relational ambivalence phenomenon (see (Methot, Lepine, Podsakoff,

& Christian, 2016; Methot et al., 2017).

Previous literature highlights both negative and positive outcomes of relational ambivalence, but the tilt of the literature remained on the negative side (Melwani & Rothman, 2021; Uchino et al., 2012). For instance, in a seminal work, (Lee, Thomas, Geoff, et al., 2019) found a ‘negative relationship between LMX ambivalence and performance. Capitalizing on (Festinger, 1957), these research scholars argue that LMX ambivalence violates the basic consistency principle and hence becomes uncomfortable and even agonizing for the individual, lowering task performance. In contrast, (Melwani & Rothman, 2015) suggested that relational ambivalence helps individuals view the situation from a partner’s viewpoint, which minimizes the risk of guilt and leads to positive outcomes. A set of researchers also emphasized the need for scholarly investigations disclosing the positive effects of relational ambivalence (Lee, Thomas, Geoff, et al., 2019; Rothman et al., 2017).

Based on previous literature, it is argued that ambivalence enhances the cognitive breadth of the followers who experience dyadic ambivalence. Ambivalence creates the complexity of thoughts which propels followers to take multiple perspectives of the situation. It enhances their cognitive flexibility and adaptability and leads to creative solutions to problems (Rothman et al., 2017). Moreover, considering that Innovation and creativity are the sources of competitive advantage, these arguments gave us enough motivation to study Innovation and creativity as positive consequences of LMX ambivalence. So this dissertation offers a multilevel perspective on LMX ambivalence by taking IWB and team creativity as positive consequences of mixed cognitions at individual and group levels.

Moreover, studies from different disciplines indicate personality traits, conflicting individual norms, goals, roles, perceived similarity, and organizational factors are sources of ambivalence (Zou & Ingram, 2013; Connidis & McMullin, 2002; Pratt & Doucet, 2000b) Wang & Pratt, 2007). Although ambivalence in management literature is still at an infant stage, leadership as a contextual factor is surprisingly neglected. Leaders are sources of career progression and hold vital resources such as the source of reward and punishment, self-esteem, and support (Wen, Wu, & Long, 2021; Srivastava, Pathak, Singh, & Verma, 2022). In contrast, followers are at the lower end, less powerful, and torn between dependence and the need

for autonomy, and hence they are prone to ambivalent orientations. So following this line of argument, this dissertation considers PL as one of the important organizational and contextual factors that may have the potential to trigger LMX ambivalence through paradoxical demands inherited in a leader's role.

Zhang, Waldman, Han, and Li (2015) coined the concept of PL as having “seemingly competing yet interrelated behaviors to meet competing workplace demands simultaneously and over time.” For instance, leaders are expected to deal with employees uniformly while acknowledging their individual needs and expectations; they are required to foster creative insights among followers through flexibility while controlling them through rules and regulations simultaneously. They must have the ability to respond to these paradoxical challenges to achieve organizational and individual goals. It is suggested that these paradoxical behaviors might have the potential to create confusion and tension among followers toward their leaders, which makes this relationship ambivalent. So, this dissertation includes PL as a predictor of LMX ambivalence.

Moreover, the study gives a multilevel perspective for analyzing Innovation and creativity in organizational settings. Past research has noted PL as an individual and a multilevel phenomenon (Ishaq, Bashir, & Khan, 2021). Similarly, team creativity is a multilevel variable by design and is used in this study at level 2. Moreover, Mumford and Hunter (2005) emphasized that the interaction of variables at different levels produces contradictory findings, so studying Innovation and creativity at different levels is beneficial. Therefore, anticipating these researchers' directions, it is intended to study IWB at the individual level and team creativity at the group level. So following this line of argument, this dissertation considers PL as one of the important organizational and contextual factors that may have the potential to trigger LMX ambivalence through paradoxical demands inherited in a leader's role.

So, the current dissertation extends the existing knowledge in ambivalence by exploring PL as the predictor of LMX ambivalence. At the same time, Innovation and creativity at individual and team levels are studied as positive outcomes of PL and LMX ambivalence.

1.2 Gap Analysis

1.2.1 Theoretical Gap

1.2.1.1 Paradoxical Leadership (PL) as a Contextual Factor

The context for organizations is important for two reasons; it carries opportunities and constraints that frame organizational behavior and define functional relationships between variables. [Johns \(2006\)](#) recognized little attention is given to measuring context's impact on organizational behaviors in literature. In this era when change is the only permanent feature of the environment, paradox research is gaining momentum, but empirical studies in this domain are still limited. The primary focus of the researchers remained on unpacking the paradoxes at all levels and developing skills and strategies for leaders to handle these dualities constructively ([Smith & Lewis, 2011](#); [Pearce, Wassenaar, Berson, & Tuval-Mashiach, 2019](#)).

With a few exceptions, we still know little about the impact of PL on followers' outcomes, who are the main actors and are responsible for organizational success or failure. [Zhang et al. \(2015\)](#) developed the scale for paradoxical leadership (PL) and found that paradoxical leaders inculcate proficient, adaptive, and proactive behaviors among followers. Similarly, [Tripathi, Miron-Spektor, and Lewis \(2018\)](#) proved that PL elicits tension and emotional ambivalence among subordinates and produces counterproductive work behaviors. PL literature is still in its infancy, and these studies are insufficient to claim anything with confidence. Although PL may have positive and negative impacts on followers' behaviors, it is important to study this leadership as a contextual factor to gauge its impact on followers with different dimensions.

Paradoxical leaders influence their followers in various ways, developing a state of tension or confusion among them. For instance, a leader emphasizes collaboration for better developing a team while at the same time focusing on control to direct and maximize performance. They show opening behavior to encourage employees to hunt new ideas and hence exhibit flexibility while at the same time showing closing behavior to control performance through rules and regulations to achieve

efficiency (Shao, Nijstad, & Täuber, 2019). From the leadership perspective, these dualities or paradoxical cues make the situation uncertain and complex, generating mixed productive and unproductive behaviors (Tripathi et al., 2018). But the question remains undecided when and how PL produces beneficial outcomes. This aspect is missing in the literature, a vivid gap demanding an investigation.

So, the first gap identified is to study PL as an environmental contextual factor influencing employees' individual and team-level creative behaviors with a series of mediating and moderating mechanisms.

1.2.1.2 Paradoxical Leadership as an Antecedents of LMX Ambivalence

Dualities or paradoxes create cognitive challenges or tensions (Karhu & Ritala, 2020). Individuals facing paradoxes may have contrasting evaluations forwards an object, person, or orientation simultaneously (Baek, 2010; Priester & Petty, 2001). Paradoxical leaders exhibit paradoxical behaviors such as, “self-centeredness and other-centeredness,” “maintain distance and closeness,” “treat followers uniformly while considering their identities,” and “focus on flexibility and control simultaneously” (Zhang et al., 2015). These dualities, by the process of a vicious cycle, create tension and conflict (Lewis, 2000; Smith & Lewis, 2011) towards the leader’s behavior which may result in LMX ambivalence.

The link between PL and LMX has not been studied in the literature to date; (Tripathi et al., 2018) established that paradoxical leaders might challenge the consistent needs of the followers, leaving them in a state of uncertainty which triggers counterproductive behaviors among them. These researchers suggested emotional ambivalence as the outcome of paradoxical behaviors from a leader’s perspective. Similarly, Miron-Spektor, Gino, and Argote (2011) argued that if a leader’s paradoxical cues elicit “either/or” thinking instead of a “both/and” approach, tension and anxiety are the natural outcomes of these dualities. It is argued that such behaviors from the leader create tensions, and followers are propelled to perceive a leader with both low and high-quality relationships simultaneously.

This condition leads to LMX ambivalence, i.e., simultaneously feeling a high and low-quality relationship with the leader.

Building on the argument that paradoxical leaders' behaviors are sources of confusions and tensions, this dissertation uniquely accounts for PL as a predictor of LMX ambivalence.

1.2.1.3 IWB as the Outcome of LMX Ambivalence

LMX ambivalence is a new concept introduced in the literature. Studies in this domain are sparse, so it is challenging to claim anything confidently. But the argument can be drawn from LMX and ambivalence literature separately to clarify the foundation for the IWB relationship. Scholars concluded that work climate, leadership, individual difference, 'job characteristics, personality, and values are positively related to IWB. In the LMX debate, many researchers (e.g., [Javed, Naqvi, Khan, Arjoon, & Tayyeb, 2017](#); [Xie et al., 2020](#)) maintained that leader show trust and respect and give autonomy to subordinates in quality LMX relationship, which help them to exhibit risky behaviors such as IWB. So, following this vein of argument, the question remains undecided what impact would LMX ambivalence have on employees' behavior, particularly on IWB?

[Fong \(2006\)](#) established that emotional ambivalence could lead to creativity and argued that an unusual environment increases the sensitivity towards informational cues coming from the environment, driving individuals towards suggesting creative and unusual solutions. This study is a curtain raiser suggesting Innovation as the positive outcome of ambivalence. Now it is an opportunity to understand the impact of other variants of ambivalences on creativity. Further, it is evident from the literature that ambivalence produces contradictory results. Some studies show positive outcomes, while others show negative consequences of ambivalence. For instance, [Lee, Thomas, Geoff, et al. \(2019\)](#) empirically established that attitudinal ambivalence suppresses performance; this finding contradicts the previously discussed ([Fong, 2006](#)) results.

Furthermore, researchers argued that ambivalence in relationships might be useful as ambivalent individuals can better overcome competition, collaborate, exchange

information, and show higher job performance (Rothman & Melwani, 2017; Zou & Ingram, 2013; Ingram & Roberts, 2000). Although in a dyadic perspective, Guarana and Hernandez (2015) in their study proposed that leader-follower ambivalence generates mutually beneficial outcomes, the literature is still deficient. Moreover, Methot et al. (2017) emphasized more empirical investigation to know the positive consequences of dyadic relational ambivalence.

The above discussion, argument, and empirical evidence point toward a gap in the literature. So based on the literature and argument, the current study undertakes IWB as the positive consequence of LMX ambivalence through a series of meditational mechanisms.

1.2.1.4 Negative Affective Tone as an Outcome of LMX Ambivalence

Literature classifies ambivalence into objective and subjective categories. Objective ambivalence is the “simultaneous existence of negative and positive evaluations about an attitude object.” Whereas subjective ambivalence expresses “the intensity of the ambivalence” (Ng, See, & Wallace, 2022). In other words, objective ambivalence refers to the existence of conflicting associations, while subjective ambivalence expresses the intensity of tension or conflict. Thus, subjective ambivalence is more vivid to elicit affective reactions.

Literature generally suggests ambivalence breeds negative affect (Lee, Thomas, Geoff, et al., 2019; Righetti et al., 2020; Chen & Weng, 2022). The reason is that human beings are motivated to be consistent; hence any violation to consistency is taken as unpleasant and may lead to a negative emotional response (Festinger, 1957). Ambivalence violates the consistency principle hence ending up in negative affectivity. However, studies also suggest that ambivalence may sometimes be assessed positively. For instance, Maio and Haddock (2004) suggested that “Ambivalence may be desirable when an issue is controversial. In this situation, people who appear ambivalent may give the impression of being fair and knowledgeable” (p. 435).

Although arguments on both sides cannot be neglected, ambivalence literature is still in the embryonic stage, and the affect as an outcome of ambivalence needs

more attention and empirical investigations (Lee, Thomas, Geoff, et al., 2019). Few empirical studies on the ambivalence-affect relationship do not give us the liberty to claim anything with confidence (e.g., Nordgren, Van Harreveld, & Van Der Pligt, 2006; Newby-Clark, McGregor, & Zanna, 2002). However, a recent analysis by Lee, Thomas, Geoff, et al. (2019) suggested negative affect as the natural outcome of LMX ambivalence.

However, the scarcity of scholarly debate and inconsistent results motivated us to take the negative affect as the outcome of LMX ambivalence.

1.2.1.5 IWB as an Outcome of Negative Affect

Affect as the avenue for scholarly investigation is not so old. Researchers pointed out creativity and innovativeness as the outcomes of positive affective states (e.g., Davis, 2009; Madrid, Patterson, Birdi, Leiva, & Kausel, 2014), while the literature on negative affect as the predictor of Innovation is not clear. Research gives inconclusive evidence that negative affectivity engenders or hinders innovativeness. This deficiency allows researchers to conduct further empirical investigations to clarify the phenomenon (Montani, Dagenais-Desmarais, Giorgi, & Grégoire, 2018).

Proponents who see a positive link between negative affective tone (NAT) and IWB take support from affect as an informational cue and conservation of resource perspective. These scholars argue that such individuals take negative affect as a signal to the problematic situation and warrant further resources to address that problem. They focus and deploy more efforts, tossing innovative solutions to come out of that situation (Montani et al., 2018; Yang & Hung, 2015). In contrast, scholars on the other side argue that negative affect narrows down attentional focus, depletes psychological resources, leads to an avoidant approach, decreases investment in innovative efforts, and ultimately hinders rather fosters IWB (Li, Liu, Liu, & Wang, 2017; Rietzschel, 2011). While some studies denied any relationship between negative affect and IWB (Madrid et al., 2014).

Thus, based on previous research and argument, this study finds negative affective tone as an antecedent of IWB while building on the argument that negative affective tone excites IWB in the presence of mindfulness.

1.2.1.6 Mindfulness: A Moderator

Mindfulness refers to “paying attention in a particular way: on purpose, at the present moment, and non-judgmentally” (Kabat, 2005, p. 4). Mindfulness is knowing something with an attitude of open-mindedness, kindness, and compassion (Gunaratana, 2011). Mindfulness is considered a disposition or trait, as well as a state, but research indicates that some individuals are more mindful than others which tags it as a disposition or trait (Baer & Lykins, 2011). Past research consistently emphasizes the role of mindfulness as a predictor and regulator of negative emotions (Martin, Blair, Clark, Rock, & Hunter, 2018; Lu et al., 2019). By acknowledging its importance, Good et al. (2016) summarized the literature with a call for more studies about its positive outcomes for organizations and workplaces.

Moreover, affect as an information model suggests that emotions inform people about the current state of their world and their standing in it (Roseman, 1984). Specifically, negative affect invokes signals about situational sensitivity, engaging carefully and deep information processing (To, Fisher, Ashkanasy, & Zhou, 2021). On the other hand, mindfulness definition highlights three aspects. First, present focused consciousness; second, paying close attention to internal (thoughts, emotions) and external (events, relationships) phenomena and third, being attentive to stimuli in an open and accepting way (Gibson, 2019). It is argued that negative emotions can only sensitize individuals about environmental cues if they are mindful.

The extent literature on mindfulness and creativity link is limited and produces mixed results, hence elevating the need for further investigations (Lebuda, Zabelina, & Karwowski, 2016). For instance, Ostafin and Kassman (2012) suggested that mindfulness enhances the ability to solve insight problems and enhance creativity by reducing habitual responses when searching for solutions; mindfulness training improves creative performance (Ding, Tang, Deng, Tang, & Posner, 2015). While Remmers, Topolinski, Dietrich, and Michalak (2015) found mindfulness counterproductive for intuitive thinking. These contradictory results and calls from researchers (Hyland, Lee, & Mills, 2015; Lebuda et al., 2016) give hints for more

investigations. Moreover, [Montani et al. \(2018\)](#) maintained that mindfulness moderates the relationship between negative affect and creativity but when negative affect is mild. They emphasized the need for further investigation in this regard. Furthermore, [Ashforth et al. \(2014\)](#) also suggested that a mindful individual is well aware of internal and external stimuli and has the tendency of reluctance to simplify, having a natural flow towards complexity, so it must be studied along with ambivalence.

The above evidence shows that although mindfulness is new to organizational literature ([Montani et al., 2018](#)), it is mainly used to regulate emotions and reduce stress. Mindfulness broadens attentional scope and influences emotions, cognition, behavior, and physiology, affecting workplace outcomes, including performance, relationships, and wellbeing ([Good et al., 2016](#)). So, by taking the lead from signaling property of affect, it is theorized that negative affect only improves attentional focus if the individual is mindful. In the absence of such a trait, negative affective yields counterproductive results.

So, previous literature and arguments presented above nudge us to take mindfulness as a state that moderates the relationship between LMX ambivalence – NAT and between NAT – IWB.

1.2.1.7 Paradoxical Leadership as a Predictor of Team Creativity

Today's organizations face complexity and dynamism; therefore, growing reliance on teams for creative solutions is not surprising. Teams are the major source of creative endeavors for path-breaking scientific discoveries ([Uzzi, Mukherjee, Stringer, & Jones, 2013](#); [Wuchty, Jones, & Uzzi, 2007](#)). This is why interest in team creativity is burgeoning among scholars and practitioners ([Sung & Choi, 2012](#)). As ([Shin & Zhou, 2007](#), p. 1715) suggested, team creativity is “the production of novel and useful ideas concerning products, services, processes, and procedures by a team of employees working together.”

Despite a long interest in this area, researchers assert that factors facilitating team creativity are still not fully understood ([Li, She, & Yang, 2018](#); [Shalley & Gilson, 2004](#); [Shin & Zhou, 2007](#)). From a paradoxical perspective, empirical studies in

this domain are sparse. A few researchers focused on investigating the impact of paradoxical leaders on individual followers (Zhang et al., 2015; Tripathi et al., 2018; Yang, Li, Liang, & Zhang, 2021), yet limited attention has been paid to the team-level outcomes. For instance, (Li et al., 2018) established that PL encourages paradoxical thinking and propels team members to adopt a “both and” approach that fosters innovative performance. But these researchers took PL as a moderator. According to Zhang et al. (2015), a paradoxical leader deals with five contradictory demands such as 1. “combining self-centeredness with other-centeredness,” 2. “maintaining both distance and closeness,” 3. “treating subordinates uniformly while allowing individualization,” 4. “enforcing work requirements while allowing flexibility,” and 5. “maintaining decision control while allowing autonomy.” Such leaders regard team members’ viewpoints (Li et al., 2018), bringing flexibility and stability and helping firms adopt and deal with changing environmental conditions. Paradoxical leaders develop a discretionary work climate that encourages collaboration among team members, which collectively enhances the team’s perspective-taking (Parker & Axtell, 2001) and may enhance creativity among team members. Zhang, Zhang, Law, and Zhou (2022) published a study advocating a positive relationship between PL and team creativity, but they investigated the phenomenon of creativity among individual team members. It is a dire need to investigate the paradoxical impact of leadership on teams. *So deficiency reflected in literature and calls from many researchers for more studies in this domain see, for instance, (Zhang et al., 2015; Li et al., 2018; Miron-Spektor, Erez, & Naveh, 2011) mold us to tap the impact of PL on team creativity. The current study investigates a multilevel perspective of the phenomenon at teams where data on team creativity is collected from the manager for the whole team.*

1.2.1.8 Negative Affective Tone (NAT): A Mediator between Paradoxical Leadership and Team Creativity

Literature continuously spells out attributes of a leader or leadership styles as the source of affective tone at the individual and the team level. Still, this relationship is more explicit in the case of positive affective tone (PAT) than negative affective

tone (NAT) because negative affective tone involves complexities and mechanisms. For instance, [Sy, Choi, and Johnson \(2013\)](#) suggested that a leader's expressivity enhances PAT through mood contagion, which contributes to the charismatic characteristics of the leader. Other studies also show affect as the key mechanism between leadership styles and group performance (e.g., [Huang, Liu, Cheung, & Sun, 2022](#); [Wu & Wang, 2015](#)), but most studies have been conducted at the individual level. Literature vividly indicates that PL enhances positive affective tone (PAT). For instance, [Chen, Wang, Zhang, and Guo \(2021\)](#) noted that PAT mediates the relationship between PL - OCB. This study gives clues about the PAT as a mediating mechanism between the PL-Creativity link. Moreover, the study provides individual-level insight into the phenomenon, ignoring group-level perspective, indicating a clear gap in the literature.

From a paradoxical perspective, a cohort of researchers noticed this deficiency (for instance, [Sparr, 2018](#); [Helpap & Bekmeier-Feuerhahn, 2016](#)) and called for studies to delve into the phenomenon. [Lewis \(2000\)](#), through his framework, claims that paradoxical tensions develop paradoxical thinking, which fuels creativity. Without paradoxical thinking, only one side of tension is emphasized, and demand for the other is intensified, fueling anxiety that may compromise job satisfaction and well-being, which he called a vicious cycle. These negative emotions may have an impact on the team's creative endeavors.

It is widely accepted that positive and negative affect are regarded as highly 'related but distinct' factors ([Sy, Côté, & Saavedra, 2005](#)) with different implications on attitudes, cognitions, and behaviors ([Tsai, Chi, Grandey, & Fung, 2012](#)). Prior studies also demonstrated the beneficial impacts of positive affect and deleterious implications of negative affect on team performance (see [Lin, He, Baruch, & Ashforth, 2017](#); [Cole, Walter, & Bruch, 2008](#)). Similarly, a cohort of researchers concluded that PAT enhances creativity at the individual and team levels. On the other hand, they presented contradictory results with negative affectivity and creativity, specifically at the team level ([Tsai et al., 2012](#)).

For instance, a set of researchers view negative moods as alarming factors about the environment that 'alert members to identify potential problems associated with the current state of affairs that may help to enhance team creativity (see

George & King, 2007). However, Rhee (2007) suggested negative moods as harmful to creativity because they inhibit social interactions and moral building among members. Moreover, Grawitch, Munz, and Kramer (2003) found no relationship between negative affective tone and creativity. The scarcity of research in this domain and its contradictions point toward the level of complexity that, according to many researchers, needs further investigation (Tsai et al., 2012; George & King, 2007).

So, based on said argument and cascading theoretical confusions, it is rightly intended to take NAT (negative affective tone) as a possible mediator between PL and team creativity.

1.2.1.9 Team-Level Mindfulness: A Moderator

Prior research extensively investigated mindfulness as an individual-level construct (Good et al., 2016) characterized as the mental ability to focus on the “present moment nonjudgmentally” (Hayes & Shenk, 2004). While some researchers have seen it as a team-level phenomenon with different conceptualizations (David, 2015), but studies in this area are scant. Recently, Yu and Zellmer-Bruhn (2018) defined team mindfulness as a “shared belief among team members that team interactions are characterized by awareness and attention at present events, and by experiential nonjudgmental processing of within-team experiences”.

In their seminal work, Yu and colleagues found team mindfulness as a moderator between “task conflict-relationship conflict” and “relations conflict-social undermining” (Yu & Zellmer-Bruhn, 2018). They argued that team mindfulness neutralizes the intensity of negative emotions by paying attention to the present situation or event and processing the information with an impartial mind, hence listening conflict. In the same vein of argument, it can be assumed that the intensity of the NAT arising from paradoxical tensions can be neutralized through present-focused attention and experiential, nonjudgmental processing. Hence team level mindfulness may act as a buffer between PL and ‘negative affective tone.

Team-level mindfulness is considered to have a positive orientation focusing on leader’s behavior and position. Mindful team members comprehend the demands

of the situation through nonjudgmental processing and view paradoxical behaviors of leader with an open mind. So, this may enhance paradoxical thinking through the virtuous cycle (Pradies, Tunarosa, Lewis, & Courtois, 2021; Lewis, 2000), which may lead to creative endeavors. In this way, this dissertation dilute the dilemma that how the vicious cycle of Lewis's framework is turned towards a virtuous cycle that may help to take a "both/and" approach instead of an "either/or" approach.

Our resolve to study team-level mindfulness as a moderator between PL - negative affective tone and between negative affective tone creativity for the first time, is also strengthened by past studies which have found that mindfulness reduces negative affect, stress, and anxiety. (Martín-Asuero & García-Banda, 2010)

1.2.2 Contextual Gap

As discussed earlier, ambivalence is a novel conceptualization in management literature. Further, studies on attitudinal ambivalence, precisely LMX ambivalence, are sparse. In their seminal work, Lee, Thomas, Geoff, et al. (2019) found LMX ambivalence suppressing performance outcomes, and data for this study was collected from USA and China. The second study was conducted by Chen and Weng (2022) on Authoritarian-Benevolent leadership and LMX ambivalence, and data for this study were collected from China. So this dissertation is targeted at software teams from Pakistan, which not only augments the literature through theoretical advancement of the construct but also replicates the results in different contexts to serve generalizability purposes.

Pakistan is an emerging economy, and according to Pakistan Software Export Board (PSEB), the software industry of Pakistan is growing on a fast track showing a surprising growth rate of 81% in the year 2021-2022. More than 600,000 IT professionals work in more than 17000 SECP-registered IT companies (PSEB, 2022). Mass mobilization in this sector has elicited curiosity among HR practitioners and researchers. A cohort of research scholars has called for replicating existing theories to complement the existing body of knowledge. This could help managers and policymakers to make evidence-based decisions (e.g., Abbas & Raja, 2015). In

response to these scholars, the current study is an endeavor to investigate predictors and outcomes of LMX ambivalence in the Pakistani context characterized by high power distance (Hofstede, 1983) where leaders enjoy huge powers to influence employees outcomes. So this study provides a useful insight for managers and HR practitioners to manage ambivalence to reap maximum benefits.

The study also aims to investigate PL and LMX ambivalence as predictors of Innovation and creativity in IT industry. Although Innovation and creativity are imperative for every industry, the IT industry is under massive pressure because the shelf life of a software product is merely a day. There is an immense pressure on team members and leaders to meet deadlines and provide innovative solutions daily, making their jobs very stressful (Shafi et al., 2020) causing mental and physical health issues. Innovation and creativity are at the core to success of the IT industry. Paradoxes are sources of Innovation, therefore, investigating PL and LMX ambivalence with Innovation and creativity from IT professionals of Pakistan is a good venue to be explored.

1.3 Problem Statement

In today's rapidly evolving IT industry, the surge in IT products like artificial intelligence and other cutting-edge technologies necessitates innovation and creativity. To meet this challenge, managers seek refuge in paradoxical behaviors that promise innovation and creativity at individual and team levels. But these paradoxes, such as flexibility vs. control, impose conflicting cognitions about managers among subordinates. Environmental pressures and this dyadic intricacy have elevated the challenge for organizations as well as for managers. The innovative and paradoxical literature is surprisingly silent on this very delicate phenomenon indicating towards a very crucial gap. For instance, studies show that innovation and creativity can be elevated via paradoxical leadership behaviors (Ishaq et al., 2021), but PL is a recent conceptualization that still lacks a deep understanding of what mechanisms lie between PL and innovative behaviors that can hinder or foster creativity. Furthermore, paradoxes from leadership instill ambivalent cognitions in followers (Guarana & Hernandez, 2015) that may have negative

connotations for both dyadic relationships and organizations. Practitioners and academicians are still inquisitive about the conditions under which ambivalence could yield beneficial outcomes.

The study, however, gives the answer by taking LMX ambivalence as a mechanism between PL- and innovative work behaviors and team creativity links. Unlike LMX quality, LMX ambivalence is a bivalent construct, which means that a leader may have both high- and low-quality relationships with the followers simultaneously. This concept has been recently introduced in management literature and requires re-establishing pre-existing theories of the constructs while exploring new associations and outcomes. Some scholars found LMX ambivalence to be counterproductive for performance (Lee, Thomas, Martin, & Guillaume, 2019). In another study, Chen and Weng (2022) explored authoritarian-benevolent leaders as the predictors of LMX ambivalence, while proactive work behaviors and unethical pro-organizational behaviors were the outcomes of the construct. These few studies do not provide us with enough empirical knowledge to claim anything confidently, clearly indicating a gap in the literature.

Moreover, the two studies mentioned above noted negative outcomes of LMX ambivalence; however, some other scholars emphasize that relational ambivalence could potentially breed beneficial consequences for organizations and streamline calls for more studies (see, for instance, Methot et al., 2016; Rothman et al., 2017). At this point, queries remain unclear about the predictors and outcomes of LMX ambivalence and whether these outcomes benefit organizations. While taking PL as a very important predictor of LMX ambivalence and IWB and team creativity as its outcomes, the study contributes to all three constructs in the literature.

This empirical inquiry cherishes the innovation literature by adding LMX ambivalence and PL as very important predictors. At the same time, it augments PL literature by taking LMX ambivalence as an important consequence. The study also extends the nomological structure of LMX ambivalence by testing PL as the predictor and IWB and team creativity as positive outcomes of the construct. LMX ambivalence is a conflicting situation that has the potential to breed negative affective experiences. This negative affect may hinder or foster creativity. The

study takes negative affect as the mechanism between LMX ambivalence, IWB, and team creativity.

Moreover, mindfulness, although not new, is gathering mass at the organizational level, and by probing through its miraculous effects on socio-psychological implications at work, a strong need for further investigations has been highlighted by esteemed scholarship persistently (Li, Zhu, Zhang, Gustafsson, & Chen, 2019). In the current study, mindfulness serves as a moderator at individual and team levels that weakens the negative role of affect on innovation and creativity. In addition, the software industry has been targeted in this study, which is a rapidly flourishing sector in Pakistan. According to the Pakistan Software Export Board (PSEB), annual IT exports in 2012–2013 were \$0.8 billion, which abruptly sprang up to almost \$3.0 billion in 2022 (precisely \$2.6 billion), showing a surprising growth rate of 81% (PSEB, 2022) and needing serious attention for its problems.

1.4 Research Questions

Research Question 1

Whether PL is associated with LMX ambivalence, negative affective tone, IWB, and team creativity?

Research Question 2

Whether LMX ambivalence is associated with negative affective tone, IWB, and team creativity?

Research Question 3

Whether negative affective tone is associated with IWB and team creativity?

Research Question 4

Does LMX ambivalence mediate between PL and IWB?

Research Question 5

Does LMX ambivalence mediate between PL and team creativity?

Research Question 6

Does negative affective tone mediate between LMX ambivalence and IWB?

Research Question 7

Does negative affective tone mediate between PL and team creativity?

Research Question 8

Does negative affective tone mediate between LMX ambivalence and team creativity?

Research Question 9

Whether PL is associated with team creativity through the sequential mediation of LMX ambivalence and negative affective tone

Research Question 10

Whether PL is associated with IWB through the sequential mediation of LMX ambivalence and negative affective tone?

Research Question 11

Does individual-level mindfulness moderate the relationships between LMX ambivalence – negative affective tone and between negative affective tone-IWB?

Research Question 12

Does team-level mindfulness moderate the relationship between PL-negative affective tone and between negative affective tone-team creativity?

Research Question 13

Does individual-level mindfulness moderate the indirect effect of PL on IWB via a negative affective tone?

Research Question 14

Does team-level mindfulness moderate the indirect effect of PL on team creativity via a negative affective tone?

1.5 Research Objectives of the Study

The study aims to extend the literature on creativity and innovation at individual and team levels by exploring paradoxical leadership and LMX ambivalence as

predictors. Further, the current investigation is directed to enhance the knowledge of relational and attitudinal ambivalence in the form of LMX ambivalence by exploring its positive outcome (IWB) through a series of mediating and moderating mechanisms. The study also enriches team PL literature by gauging its impact on team creativity.

To study IWB as a positive outcome of PL.

- 1- To find out if PL is associated with LMX ambivalence, negative affective tone, IWB, and team creativity.
- 2- To examine if LMX ambivalence is associated with negative affective tone, IWB, and team creativity.
- 3- To know if negative affective tone is associated with IWB and team creativity.
- 4- To investigate if LMX ambivalence mediates between PL and IWB.
- 5- To investigate if LMX ambivalence mediates between PL and team creativity.
- 6- To test if negative affective tone mediates between LMX ambivalence and IWB.
- 7- To find out if negative affective tone mediates between PL and team creativity.
- 8- To know if negative affective tone mediates between LMX ambivalence and team creativity.
- 9- To find out if PL is associated with team creativity through the sequential mediation of LMX ambivalence and negative affective tone.
- 10- To examine if PL is associated with IWB through the sequential mediation of LMX ambivalence and negative affective tone.
- 11- To know if individual-level mindfulness moderates the relationship between LMX ambivalence – negative affect and between the relationships of negative affect-IWB.
- 12- To find out if team-level mindfulness moderates the relationship between PL-negative affective tone and negative affective tone-team creativity.
- 13- To examine if individual-level mindfulness moderates the indirect effect of PL on IWB via a negative affective tone.

14- To investigate if team-level mindfulness moderates the indirect effect of PL on team creativity via a negative affective tone.

1.6 Significance of the Study

The study under discussion is a multilevel analysis of ambivalence, creativity, and Innovation and contributes both in theory and practice in a variety of ways as discussed below:

1.6.1 Theoretical Significance

The concept of ambivalence is not new to the world and has been studied in sociology and psychology, but its induction into organisational literature is still in its infancy. Different variants of ambivalence have changed the conceptualization of many constructs. This is why a set of researchers (e.g., [Rothman et al., 2017](#); [Ashforth et al., 2014](#)) called for a deep understanding of the ambivalence phenomenon. Among its different variants (such as emotional ambivalence, attitudinal ambivalence, trait ambivalence, relational ambivalence, and expressed ambivalence), relational ambivalence is the least studied area (cf. [Methot & Rosado-Solomon, 2019](#); [Methot et al., 2016](#)) and is the focus of the current investigation. As relationships constitute a larger part of the organizational phenomenon, the dyadic relationship of leader and follower has greater implications on the performance and success of individuals and organizations, so the present study is aimed at LMX ambivalence. Traditional LMX theory follows “either/or” approach and proposes either a low or high-quality relationship between a leader and a follower, which makes the concept univalent. While on the other hand, LMX ambivalence adopts “both/and” approach and suggests the simultaneous experience of both high and low-quality relationships by followers, making the concept bivalent and has changed the debate in LMX literature. This novel conceptualization of attitude (LMX ambivalence) has surfaced new opportunities for researchers and practitioners. Now, with this new insight into LMX theory, it is necessary to revisit its predictors and implication with fresh zeal. This realization propelled [Lee, Thomas, Martin, and Guillaume](#)

(2019) to study LMX ambivalence for the first time. In a seminal work, they developed a new scale for LMX ambivalence and asked for more studies.

Moreover, prior studies have exposed the negative outcomes of ambivalence while there is always a brighter side of the picture. In their essay, Rothman et al. (2017) realized this deficiency and asked for more inquiries to elucidate positive outcomes of ambivalence. The current study anticipates this call by considering IWB as a positive outcome of LMX ambivalence through a series of mediating mechanisms. In this way, the study complements LMX ambivalence literature by taking IWB as a positive outcome. At the same time, it also extends IWB literature by taking LMX ambivalence as a very potential antecedent. This theorization has opened a new understanding of the phenomenon that how an individual with a confused cognitive frame of mind (due to LMX ambivalence) demonstrates innovative endeavors.

Furthermore, the study investigates PL as the unique predictor of LMX ambivalence. Paradoxes are part and parcel of a leader's role and are built-in features due to hierarchical considerations. These paradoxes are imposed on a leader from an organization and environment, which are passed on to followers. But the literature seemingly discusses the paradoxical demands imposed on the leader by hierarchical obligations (Lewis, 2000; Smith & Lewis, 2011). The current dissertation anticipates this deficiency by gauging the impact of these dualities on followers and their individual and group-level outcomes in terms of IWB and team creativity. It adds to the literature by answering how these paradoxical demands, if not appropriately managed, affect innovative endeavors at the individual and team levels. It also reveals how can a "both/and" approach, instead of an "either/or" approach, be achieved through mindfulness.

The current investigation brings team creativity to light at the team level by considering PL as a contributing factor mediated by a negative affective tone (NAT). For the first time, PL is discussed as a predictor of NAT and team creativity. Affective climate includes both team positive affective tone (NAT) and negative affective tone (NAT). Many researchers frequently study TPAT and team creativity (see Shalley, Gilson, & Blum, 2009), but the NAT is not well explained with creativity,

which is also reflected in calls from many researchers for further investigation (Tsai et al., 2012; George & King, 2007) .

Furthermore, past researchers elucidated deleterious outcomes of negative affect at the team level moderated by different variables (Chi & Lam, 2022). Still, team-level mindfulness as a buffer to negative affect has not been studied yet. Mindfulness neutralizes the intensity of negative emotions by enhancing attention to the present moment and emphasizing experimentation without being judgemental (Yu & Zellmer-Bruhn, 2018). For the first time, this study investigates team-level mindfulness as a moderator between relationships of paradoxical leadership-NAT and NAT—team creativity. Team-level mindfulness is a new concept, and its scale has been developed recently by Yu and colleagues (Yu & Zellmer-Bruhn, 2018). The study also gives a multilevel perspective of Affective Event Theory at individual and team levels, which is also rare in the literature.

1.6.2 Practical Significance

A well-known fact of the day is that creativity and innovation are at the core of the survival of almost all organizations. Globalization and rapid changes in the environment have increased organizations complexity, which has enhanced the need for creative solutions to problems. Environmental shifts strongly influence the IT industry; therefore, increasing demands for creative and innovative investments have become a challenge for managers and team leaders.

The current dissertation is aimed to address this intriguing issue among software team members and team leaders. The challenging question “how to be creative?” is addressed in this study with a unique perspective. A high growth rate of 81% is witnessed in the IT industry of Pakistan in 2022 (PSEB, 2022), but this is not free from the challenge for managers and team members. This study explains that paradoxes and ambivalence are inevitable in workplaces that may have deleterious outcomes, but these challenges can be translated into opportunities if dealt with sensibly.

At the individual level, the study guides managers how paradoxical cues from a leader may be the source of ambivalence (LMX ambivalence), which increases IWB

among workers through the mechanism of negative affective tone and moderation of mindfulness. Previous studies have clearly demonstrated that emotions have a negative impact on organisational outcomes. This dissertation implies that if managers have teams of mindful individuals, negative affect caused by paradoxical cues and LMX ambivalence will be reduced because mindfulness improves present concentration and attention to minute details, resulting in creative problem solutions (Aziz, Bellows, & Wuensch, 2021; Tarraf, McLarnon, & Finegan, 2019).

The current study also enhances the knowledge of managers/ supervisors that a leader's paradoxical cues in teams evoke negative affective tone through top-down and bottom-up approaches and by the process of emotional contagion, negative affectivity hinders creativity. This study also informs that team-level mindfulness diminishes negative affectivity and helps to increase creativity. This could help the managers to have mindful individuals in teams and conduct training workshops to develop mindfulness among team members to reap the benefits of paradoxes and ambivalence.

As the study is conducted on software development team members and their supervisors, the scope of this dissertation is to elucidate the fact that innovation and creativity are the basic driving forces in this industry. But situational complexity and environmental dynamism drive leadership style paradoxically, which propels team members to experience negative affective tone at individual and team levels. This situation compromises innovation and creativity. But if the team members are mindful, it neutralized the negative affective tone, helps them better understand the situation, and guides them in making better decisions that foster innovation rather than hinder it. The study provides interesting insights for theorists and academicians as it contributes to different theories such as paradoxical leadership, IWB, and team creativity. It is equally beneficial for practitioners as it helps them understand the phenomenon from different angles and suggests how mindfulness neutralizes negative affectivity and augments innovative and creative endeavors. It also suggests that if such consideration is taken into account during the selection and training processes, mindfulness can be garnered and its dividends can be enjoyed.

1.7 Affective Event Theory (AET)

The study under discussion is based on the sequential mediation model of innovation and creativity at individual and team levels. The multilevel AET framework is well suited to describe all the relationships between different variables.

In the last decade of the twentieth century, Weiss and Cropanzano (1996) summarized the debate on emotions in a broad and comprehensive framework called Affective Event Theory (AET) which illuminates the intricate attitudinal and behavioral relationships with emotions that remained in darkness before. This guiding theoretical framework elucidates the ‘structure, causes, and consequences of affective experiences at work. In general, AET attempts to explain how certain environmental factors produce certain events at work that lead to certain emotional reactions (positive or negative), a process that may be influenced by individual disposition and ultimately stimulates certain attitudes and/or behaviors in individuals. So, at the heart of AET is the premise that one’s affective reaction is stimulated by environmental factors and events at work. These affective reactions then determine attitudes and subsequent behaviors. (Fig. 1.1).

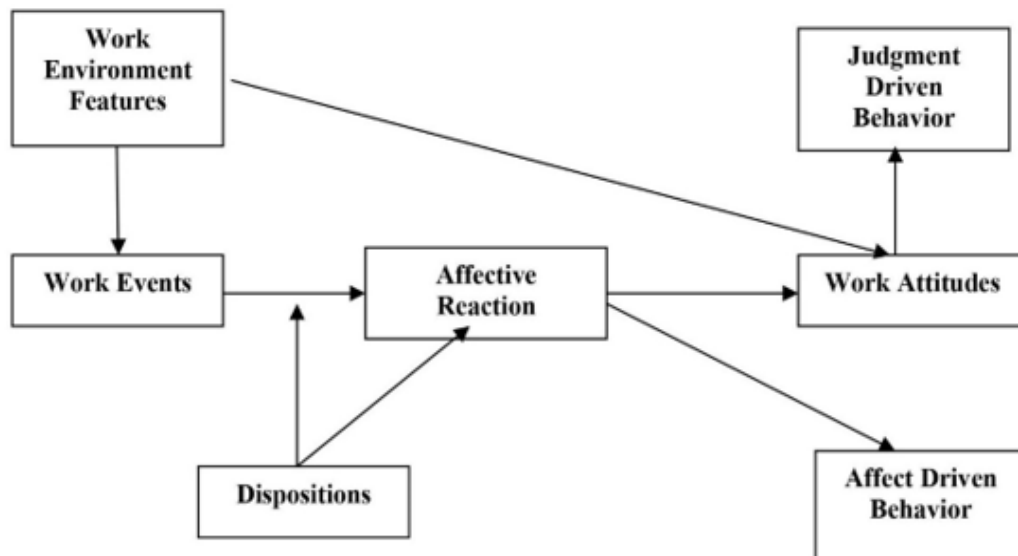


FIGURE 1.1: Affective Event Theory (Weiss & Cropanzano, 1996)

Past researchers have extensively utilized AET to explain different relationships at the individual and group levels (see, for instance, Troth, Rafferty, & Jordan, 2021; Tse & Ashkanasy, 2015; Landolfi, Brondino, Molino, & Presti, 2022). The current

study conceptualizes affect and creativity as multilevel constructs to investigate the existing research on affect and creativity at the individual and team levels.

A leader is the most powerful and influential environmental factor (Han & Bai, 2020) with the baggage of dualities embedded in his/her role, such as emphasis on control vs flexibility, exploration vs exploitation, flexibility vs efficiency, etc., which make the situation complex. So it is proposed in this dissertation that the dual nature of PL as an environmental factor that induces LMX ambivalence among certain employees as events at work. Lee, Thomas, Martin, and Guillaume (2019), the pioneer of this concept, considers LMX ambivalence as an attitudinal factor and a form of conflict based on the cognitions of followers about the leader (i.e., attitudes). Many research scholars have used conflicts and cognitions as work events that evoke different emotions (Ghasemy, Sirat, Rosa-Díaz, & Martín-Ruiz, 2021; Peng, Bell, & Li, 2020; Luo & Chea, 2018).

According to AET, work events (e.g., LMX ambivalence) evoke emotional experiences such as negative affect, which may lead to IWB through two causal routes. First, LMX ambivalence may directly influence IWB. Here AET is used with a slight variation of having the direct influence of events on affect-driven behavior. Past research also verifies such relationships. For instance, Walter and Bruch (2009), in a study on charismatic leader behavior, linked environmental factors with both attitudes and behaviors. Similarly, moderators in the same study were used between affect, attitudes, and behaviors, while in theory, only a few links were proposed. In the current study's second route (indirect route), LMX ambivalence is linked with IWB via the mediation of negative affect. The negative affect decreases IWB by narrowing down cognitions, decreasing attentional focus, and promoting convergent thinking (Merlo, Shaughnessy, & Weiss, 2018; Nijstad, De Dreu, Rietzschel, & Baas, 2010).

For team creativity link, it is argued that a team leader as an environmental factor induces LMX ambivalence among team members through paradoxical behaviors. LMX ambivalence serve as a work event (hassel) that breeds negative affective experiences in followers which as a result negatively influences team creative endeavours. Individual-level mindfulness is a dispositional factor (Maltais, Bouchard, & Saint-Aubin, 2020) that buffers between negative relationships of

LMX ambivalence-negative affect. Mindfulness has characteristics of present focus, paying close attention to internal and external stimuli in an open and accepting way (Zheng, Ni, Liu, & Liang, 2022). Mindful individuals exhibit mild tone during conflicts, increases positive emotions and decrease negative emotions with helping behaviors (Wu et al., 2019) and have been used in many studies as moderator to regulate emotions (see, for instance, (Montani et al., 2018; Lu et al., 2019)). So in the presence of mindfulness, negative affect is neutralized, allowing LMX ambivalence to enhance IWB.

Moreover, mindfulness has the quality of being open to experience because of present focus and processing information in a nonjudgmental way. While on the other hand, the affect as information model claims that negative affect increases environmental sensitivity. So mindful individual takes every bit of information with full attention and in a nonjudgmental way which helps to find new alternatives and enhance IWB. Hence mindfulness moderates LMX ambivalence-negative affect and negative affect-IWB relations positively.

Moreover, it is proposed that team-level mindfulness, as the dispositional characteristic of a team, moderates the relationship between PL and NAT. Team-level mindfulness is a “shared belief among team members that team interactions are characterized by awareness and attention to present events, and by experiential, nonjudgmental processing of within-team experiences” (Yu & Zellmer-Bruhn, 2018). Awareness and Attention to the present situation heighten awareness among team members. It helps team members to realize the intricacy of the position of the leader due to the nonjudgmental processing of information which may help to neutralize the NAT and even turn this negative mood into a positive affective experience. This will enhance team-level creativity because of a better understanding of the complexity and excitement of the challenge. are characterized by awareness and attention to present events, and by experiential, nonjudgmental processing of within-team experiences” (Yu & Zellmer-Bruhn, 2018). Awareness and Attention to the present situation heighten awareness among team members. It helps team members to realize the intricacy of the position of the leader due to the nonjudgmental processing of information which may help to neutralize the NAT and even turn this negative mood into a positive affective experience. This

PAT will enhance team-level creativity because of a better understanding of the complexity and excitement of the challenge.

1.8 LMX Ambivalence: As a Work Event

Workplace events are specific occurrences or incidents that take place within the work environment and have the potential to generate specific affective experiences (Weiss & Cropanzano, 1996). These scholars bifurcated events into two categories. Workplace hassles, which are negative events that tend to elicit negative emotions, and uplifts, which are positive events with the potential to evoke positive emotions. Subsequently, Ashkanasy (2002) introduced the idea that certain external factors outside the organization, such as fluctuations in the stock market, socio-cultural shifts, and economic changes, could also trigger emotional experiences among employees in the workplace.

Ohly and Schmitt (2015) introduced a taxonomy based on prior research, categorizing factors into positive and negative work events. They summarized four categories of factors as positive work events, which encompass: 1) Goal achievement, problem solving, and task success; 2) Appreciation and feedback; 3) Perceived competence in social interactions; and 4) Positive experiences. On the other hand, the researchers identified seven categories of factors constituting negative work events, including: 1) Obstacles to goal attainment, work tasks, and work overload; 2) Conflicts and communication problems; 3) Managerial and internal issues, organizational climate; 4) Technical difficulties; 5) Ambiguity, insecurity, and loss of control; 6) Health and private matters; and 7) Challenges related to interactions with clients. In this study, LMX ambivalence is regarded as a negative work event because it is a paradoxical or conflicting situation wherein a follower simultaneously perceives both a high and low-quality relationship with their leader. Lee, Thomas, Geoff, et al. (2019), the pioneer of this concept, considers LMX ambivalence as an attitudinal factor and a form of conflict, rooted in followers' cognitive perceptions of their leader. Many research scholars have studied conflicts and cognitions as work events that evoke different emotions. For instance, Ghasemy et al. (2021) investigated interpersonal conflicts as work events

that elicit negative emotions. Similarly, [Peng et al. \(2020\)](#) explored relationship conflicts as work events leading to negative affective responses.

Based on this body of evidence, it is argued that LMX ambivalence represents the perception of interpersonal conflict between team leaders and team members, which gives rise to negative emotional experiences and ultimately results in reduced individual work behaviors (IWB) and diminished team creativity.

Chapter 2

Literature Review

This chapter discusses the background of all variables, including paradoxical leadership, LMX ambivalence, negative affective tone (NAT), IWB, team creativity, individual-level mindfulness, and team-level mindfulness. This chapter also covers direct and indirect relationships via mediations and moderation between hypothesized variables, which have also been discussed in detail.

2.1 Background of Variables

2.1.1 LMX ambivalence

2.1.1.1 What is Ambivalence?

Ambivalence is derived from the Latin words “ambo” means both and “Valentia” means strength. Historically, the term “ambivalence” appeared in Aristotle and Plato’s writings and was first introduced in the psychological discipline by Swiss scholar [Bleuler \(1911\)](#) when he was working on schizophrenia. The concept was initially taken from abnormal psychology. Later, Freud and Kris, in their separate analyses, confirmed that ambivalence occurs due to the co-existence of opposing emotions ([Freud, 1919](#); [Kris, 1948](#)). Many researchers from the psychology discipline defined this concept in a variety of ways, such as [Gardner \(1987\)](#), who expressed it as “a psychological state in which a person holds mixed feelings (positive

and negative) towards some psychological object.” [Wegner, Downing, Krosnick, and Petty \(1995\)](#) defined ambivalence as “the extent to which one’s reactions to an attitude object are evaluatively mixed in that both positive (favorable) and negative (unfavorable) elements are included.” But later, Ashforth and colleagues’ definition provided a better insight into the phenomenon. They defined ambivalence as “the simultaneous experience of opposing orientations toward an object or target, where orientation refers to the actor’s alignment or position with regard to the object” ([Ashforth et al., 2014](#)). Despite different definitions of ambivalence, convergence on two elements is vivid: first, the presence of positive and negative associations (objective ambivalence); and second, the experience of conflict due to opposing orientations, (subjective ambivalence). Ambivalence has been recently introduced in management literature and has garnered weight in organizational behavior, theory, and strategy ([Rothman et al., 2017](#)). Research indicates that close and interdependent relationships are more prone to ambivalence ([Fincham & Linfield, 1997](#); [Lee, Thomas, Martin, & Guillaume, 2019](#)). Organizations are comparatively larger social networks with different levels, and members are tied up in multiple social ties comprising different relationships. These relationships are not free from paradoxes and contradictions, breeding ambivalent experiences at all levels. At the individual level, organizational members have complex relationships with colleagues, between supervisors and subordinates, and among friends who experience contradictory cognitions and emotions. For example, employees may think of their managers as caring and demanding and their colleagues as friends and competitors. In teams, members must simultaneously balance the needs of belongingness and uniqueness. Similarly, at the organizational level, managers and subordinates must balance needs for ‘competition and cooperation,’ ‘structure and flexibility,’ ‘exploring and exploiting,’ ‘sustainability and growth,’ etc., which may lead to ambivalent experiences ([Rothman et al., 2017](#)).

2.1.1.2 Ambivalence: Types and Differences with Related Constructs

As ambivalence is the simultaneous occurrence of ‘positive or negative orientations’ towards a target, two central themes become apparent. First, the ‘presence of both positive and negative orientations,’ and second, these orientations may be

relevant simultaneously (Van Harreveld et al., 2015). Based on these two themes, two distinct yet interrelated concepts of ambivalence are shaped, i.e., objective and subjective ambivalence. Objective ambivalence confirms the simultaneous experience of opposing (positive and negative) evaluations about an attitude object (for instance, “How positive and negative are one’s thoughts and/or feelings about X?”). In contrast, Subjective ambivalence refers to the “extent to which the individual feels conflicted or torn between the positive and negative sides of the attitude object” (Priester & Petty, 2001; Ng et al., 2022). Research is mainly directed at the subjective side of ambivalence. Moreover, ambivalence has different variants with different conceptualizations, for instance, emotional ambivalence, attitudinal ambivalence, relational ambivalence, trait ambivalence, and expressed ambivalence.’ Definitions of these concepts have been presented in **Table 2.1** (Rothman et al., 2017). They all share a common agenda, i.e., the “simultaneous existence of strong opposite orientations towards an object, person, idea, or event” (Rothman et al., 2017). Ambivalence is similar and different to various constructs such as ‘cognitive dissonance,’ ‘emotional dissonance,’ ‘hypocrisy,’ and ‘equivocality’. **Table 2.2** presents the difference between ambivalence and other similar concepts.

TABLE 2.1: Different Types of Ambivalence

Construct	Source	Definitions
Ambivalence	Ashforth et al. (2014)	“Simultaneously oppositional positive and negative orientations toward an object. Ambivalence includes cognition (I think about X) and/or emotion (I feel about X)”
Trait ambivalence	Sincoff (1990)	“Overlapping approach-avoidance tendencies, manifested behaviorally, cognitively, or affectively, and directed toward a given person or experience.”
Attitude ambivalence	Van Harreveld et al. (2015),	“Simultaneous positive and negative attitudes about

‘Construct’	‘Source’	Definitions
Mixed emotions		a target” “The co-occurrence of positive and negative affects”
Emotional ambivalence	Pratt and Rosa (2003); Pratt and Doucet (2000a)	Simultaneous experience of opposing emotions about any object of person.
Relational ambivalence	Uchino et al. (2001)	Individuals in close relationships simultaneously experience positive and negative feelings/thoughts for others.
Expressed ambivalence	Rothman and Northcraft (2015)	Expression of ambivalence (confusion or tension) through body movement such as facial expression, movement of hands, fingers, eyebrows, etc.
Ambivalence	Ashforth et al. (2014)	“Simultaneously oppositional positive and negative orientations toward an object. Ambivalence includes cognition (“I think about X”) and/or emotion (“I feel about X”)”
Cognitive dissonance	Kantola, Syme, and Campbell (1984); Baek (2010)	“When a person has two beliefs or items of knowledge that are not consistent with each other (Kantola et al., 1984, : 417)”. It is generally a very light experience of confusion, whereas cognitive ambivalence is having opposing orientations creating much confusion.
Emotional dissonance	Diestel and Schmidt (2011)	“The discrepancy between emotions felt and those required by the job role is commonly referred to as emotional dissonance (Diestel & Schmidt, 2011, : 643)”. Ambivalence is having opposing emotions simultaneously that may lead to confusion or anger, and one does not have to hide such feelings.

TABLE 2.2: Related Constructs and Definitions

Construct	Source	Definitions
Hypocrisy	Fassin and Buelens (2011)	“Clear inconsistency between word and deed (Fassin & Buelens, 2011, p 587)”. Sometimes, statements are opposite to actions and negatively impact observers; such contradictions between acts and words are termed hypocrisy, whereas ambivalence is just opposite thoughts or feelings experienced by the individual.
Ambiguity	Carson, Madhok, and Wu (2006)	It conveys complexity or insecurity about the environment. In other words, it is a lack of clarity, while ambivalence is opposing orientations towards a person or an object.
Equivocality	Daft and Macintosh (1981)	It refers to several meanings about the different activities of the organization. Sometimes messages portray contradictory or opposite meanings that might lead to ambivalence (Daft & Macintosh, 1981, : 211).

2.1.1.3 Antecedents of Ambivalence

Ambivalence is comparatively new in management literature; therefore, little is known about its antecedents and consequences (Ashforth et al., 2014). In a review, Rothman et al. (2017) noted four different sources of ambivalence in organizations. First, individual factors that have the propensity to induce ambivalence include dialectical thinking, cognitive representations of self and emotions, and a low need for cognition. Some researchers (Hui, Fok, & Bond, 2009; Rafaeli, Rogers, & Revelle, 2007; Thompson & Zanna, 1995; Ong & Bergeman, 2004) found age to predict ambivalence. Relationships are the second major source of ambivalence at workplaces because intimacy is the leading cause of ambivalence. Organizational members establish multiplex and multifaceted relationships with each other, such as peer-to-peer, subordinate-supervisor, leader-follower, mentor-mentee, trainer-trainee, etc. Many factors, such as interdependency, ‘time spent in a relationship,’ and interaction frequency within and across multiple domains, are essential to provoke ambivalence.

Third, organizational events are yet another significant source of ambivalence. Organizational change is one of the most promising candidates among such events because it evokes hope and fear simultaneously. [Larsen, Peter McGraw, Mellers, and Cacioppo \(2004\)](#) proposed that sometimes ‘disappointing wins and relieving losses’ spark ambivalence. Moreover, during a crisis, lower-than-expected stock earnings activate positive (achievement) and negative (disappointment) feelings. The fourth primary source is structural conditions that have great potential to trigger ambivalence. Contradictions in roles (role conflicts), norms (differences in personal and organizational norms), and collective identities induce ambivalence. Some other conditions, like limited resources, conflicting goals, and a competing reward system, are also essential factors in organizational ambivalence.

2.1.1.4 Dimensions and Perspectives of Ambivalence for Positive and Negative Outcomes

Initial literature generally suggests ambivalence as an aversive state, and people tend to avoid or reduce ambivalence ([Van Harreveld et al., 2015](#)), so studies generally noted negative consequences. But [Rothman et al. \(2017\)](#) discussed two dimensions related to ambivalence’s positive or negative outcomes. These include (1) Inflexibility versus Flexibility and (2) Disengagement versus Engagement. Flexibility is viewed as positive and is characterized by openness to learning, creativity, and paradoxical thinking. At the same time, inflexibility is considered negative and referred to as rigidity, resistance to change, psychopathy, etc. The engagement and disengagement dimension is a bit complex because disengagement means moving away and is negatively viewed, whereas engagement means moving towards and is characterized by trust and commitment. Engagement may be either positive (e.g., commitment) or negative (e.g., aggression). Moreover, [Zhao and Zhou \(2021\)](#) viewed flexibility and engagement as sources of good performance, while inflexibility and disengagement as sources of bad performance.

Literature has also surfaced two important aspects that help to understand the positive or negative implications of ambivalence at work. (1) Workplace Stressor Framework and (2) Paradox Perspective. The workplace Stressor framework takes

ambivalence as a source of uncertainty, threat to resources, and unpredictability that may lead to adverse outcomes. In contrast, the paradox perspective takes an integrative view of multiple divergent aspects and resources, leading to positive outcomes (Zhao & Zhou, 2021).

Studies have examined several adverse outcomes of ambivalence due to inflexibility, disengagement, and workplace stressors. For instance, following the resource conservation perspective, ambivalence was taken as a threat of resource loss that may result in deleterious outcomes. Herr et al. (2022) found ambivalent supervisors as the source of depression, anxiety, fatigue, and exhaustion for subordinates. Lee et al. (2019) established ambivalence as the source of negative affect that lowers performance. Moreover, ambivalence in followers makes them feel less confident, leading to lower self-esteem, lower self-efficacy (De Cremer, 2003; Duffy, Ganster, & Pagon, 2002), and counterproductive work behaviors (Ciampa, Sirowatka, Schuh, Fraccaroli, & van Dick, 2021).

While on the other side, taking the paradox view and incorporating flexibility and engagement dimensions, several positive outcomes can be witnessed in past research. Studies indicate that ambivalence may enhance employees' cognitive breadth by taking multiple perspectives and systematic information processing (Guarana & Hernandez, 2016) to come out of the conflicting situation. Hence, they actively engage with their work (Pratt & Rosa, 2003) and bring innovative solutions to problems (Fong, 2006) that improve their performance at work (Miron-Spektor, Ingram, Keller, Smith, & Lewis, 2018). Despite burgeoning interest in organizational psychology, studies on the positive side of ambivalence are limited; many organizational psychologists felt this deficiency and called for investigations (Rothman et al., 2017).

2.1.1.5 Relational Ambivalence

During the last decade, research has been focussed on three variants of ambivalence (emotional, attitudinal, and relational), but the emphasis remains on emotional ambivalence. Comparatively, less attention has been given to the relational perspective, which demands the attention of researchers (Methot et al., 2017).

Organizations are larger social groups comprised of members with divergent skills, capabilities, needs, and cultures. They are further tied in hierarchies having conflicting structural demands, so relationships among them are very complex. For instance, peers have friendship ties, but they are competitors too for resources and positions; managers are caring and deliver autonomy to followers, but their structural demands push them to implement rules and regulations to achieve performance goals strictly. These conflicting demands trigger confusions and tensions that may result in ambivalence experiences.

Among these workplace ties, the leader-follower relationship is the most striking, with great implications for performance outcomes (Zhao & Zhou, 2021; Bao et al., 2019). Leaders hold hiring, promotions, firing powers, and resource allocations that make leaders' positions powerful. But on the other side, followers' motivation, attachment to the leader, and strong identification result in higher performance. Therefore, this interdependent relationship is called Leader-Member Exchange (LMX). The question arises, can this very significant relationship be ambivalent? Just a few studies (precisely two to date) have discussed this vital phenomenon, leaving heaps of questions that need answers.

2.1.1.6 Leader-Member Exchange (LMX)

Footprints of LMX can be traced in role Theory and Social Exchange theory (Homans, 1958; Blau, 1968). Role theory proposes that individuals in a social set up possess different social positions and expectations linked with those positions that determine their behaviors (Biddle, 1986). Social exchange theory postulates that individuals develop mutual respect, trust, obligations, and flexibility when they frequently interact with one another over time (Cropanzano, Anthony, Daniels, & Hall, 2017). Building on these two theories, LMX presents a relationship-based dyadic view describing that a leader forms different quality relationships (ranging from high to low) with the follower called 'Leader-Member Exchange,' i.e., LMX (Graen & Uhl-Bien, 1995). LMX explains that employees' roles are not entirely described in the job description but developed after communication with the leader (Cropanzano, Anthony, et al., 2017). During the

rule-making process, leaders and followers voice their expectations that determine their behaviors. After being satisfied with followers' behaviors and efforts, leaders develop intimate relationships with some of them and provide support, attention, respect, and career benefits (Nahrgang & Seo, 2015). In reciprocity of these gestures, followers show heightened commitment, loyalty to the leader, and high-performance outcomes (Martin, Guillaume, Thomas, Lee, & Epitropaki, 2016).

Previous research demonstrates the positive association of LMX with employees' attitudes and behaviors, such as job satisfaction, task performance, citizenship behavior, and creativity (Di Stefano, Venza, & Aiello, 2020; Kwon, Lim, Hong, & Yoon, 2019; Han & Bai, 2020; Teng, Lu, Huang, & Fang, 2019). LMX has also been a predictor of employees' mental health, work engagement, and well-being on the job (Dose, Desrumaux, Bernaud, & Hellemans, 2019; Gregory & Osmonbekov, 2019).

2.1.1.7 LMX Ambivalence

LMX theory suggests that a leader forms either a high or low-quality relationship with the follower (Graen & Uhl-Bien, 1995). It is conceptualized as a unidimensional construct measured on a continuum from low to high quality. Followers in high-quality relationships with the leader receive respect, loyalty, and affection (Javed, Khan, & Quratulain, 2018; Dilshani, 2019). while, in contrast, followers in low-quality relationships receive limited trust, and benefits and rely on only contractual exchanges (Liu, Wang, et al., 2020; Omilion-Hodges & Ptacek, 2021). This traditional LMX was assumed as a univalent construct, but with the new bivalent conceptualization of different concepts, debate in literature has taken new strides. Lee, Thomas, Martin, and Guillaume (2019) presented a new conceptualization of LMX. They argued that followers can have both high and low-quality relationships simultaneously with the leader and termed it as LMX ambivalence. This novel conceptualization involved ambivalent cognitions, which affect employees' attitudes and behaviors differently. These researchers defined LMX ambivalence as:

“A leader-follower relationship that is subjectively evaluated as being made up of both positive and negative cognitions” (Lee, 2016, pp. 71).

This definition of LMX ambivalence is being used in the current dissertation. According to the definition, LMX ambivalence considers “both/and” perspective instead of “Either/or” and relies on relational and cognitive aspects of ambivalence. Previous studies in the relational domain project negative outcomes (Rothman et al., 2017) because it violates the basis consistency principles and creates tension and confusion that may lead to negative consequences. Lee, Thomas, Martin, and Guillaume (2019) used this line of argument in their seminal study to set the foundation of LMX ambivalence and found it deleterious for performance. The concept is recently introduced in management literature, and a few studies provide insufficient empirical evidence to claim anything confidently.

For instance, Chen and Weng (2022) noted authoritarian-benevolent leadership as an antecedent and pro-organizational unethical behavior, and proactive work behavior as outcomes of LMX ambivalence. Zhao and Zhou (2021) found negative outcomes of dyadic ambivalence but suggested role of different moderators to get positive outcomes of leader-follower ambivalence. These researchers claimed that followers’ integrative complexity can produce positive outcomes from LMX ambivalence such as engagement, flexibility and better performance. These studies have taken a subjective conceptualization of LMX ambivalence because it deals with the intensity of ambivalence.

2.1.2 Paradoxical leadership

This era is marked by environmental dynamism and complexity, imposing paradoxical demands on organizations and managers, which is a serious challenge for managers to deal with, even for survival. Paradoxes are inevitable for all individuals and organizations. According to the Cambridge dictionary, “a paradox is a statement or situation that may be true but seems impossible or difficult to understand because it contains two opposite facts or characteristics.” Smith and Lewis (2011) defined a paradox as “contradictory yet interrelated elements that exist simultaneously and persist over time.” “Such elements seem logical when

considered in isolation but are irrational, inconsistent, and even absurd when juxtaposed.” The definition considers the co-occurrence of two opposing conditions, but individually, they seem interrelated. According to [Cameron and Quinn \(1999\)](#), these dualities become consistent in larger systems.

Western management scholars ([Lewis, 2000](#); [Smith & Lewis, 2011](#)) introduced and studied management paradoxes. They devised macro-level strategies to resolve conflicts between radical change and incremental learning, exploration versus exploitation ([Vera & Crossan, 2004](#)). However, these paradoxical cues received less attention at the micro level. Supervisors deal with subordinates uniformly, while subordinates expect to be treated uniquely. Moreover, organizations require supervisors to exhibit controlling behaviors for better work processes and performance, while subordinates demand autonomy and discretion. Traditional leaders try to emphasize one pole of behaviors; they fail to create a synergy between both poles and hence fail to integrate paradoxes ([Peng & Nisbett, 1999](#); [Clegg, Da Cunha, & Cunha, 2002](#)). This traditional approach to handling paradoxes is known as “either/or” strategy, which is based on contingency or situational leadership theories.

Western scholars devised different approaches to managing paradoxes that were different from eastern philosophy. Behavioral Complexity and Flexible Leadership approaches are common ([Hooijberg, 1996](#); [Kaiser, Lindberg, & Craig, 2007](#); [Lawrence, Lenk, & Quinn, 2009](#)). Temporal separation is another approach that connects two paradoxical conflicts but emphasizes one at a time ([Kaiser et al., 2007](#)). Another noticeable example is spatial separation, which lets an organization follow one set of behaviors for one unit while emphasizing another set of behaviors for another unit. All these ‘strategies suggest a nonpolar outlook of paradoxes that reflects opposite view point together and integrates them gradually’ ([Van de Ven & Rogers, 1988](#); [Bobko, 1985](#)). Under such frameworks, “the role of leadership is to support opposing forces and harness the constant tension between them, enabling the system to not only survive but also continuously improve” ([Smith & Lewis, 2011](#), p. 386).

With time, an opposite strategy emerged in people management on the eastern side based on the “both/and” approach of considering both poles simultaneously. This

strategy allows to the management of paradoxes through synergy by integrating interrelated but seemingly opposing options simultaneously. For example, giving autonomy to subordinates while controlling them to a certain level side by side could yield better performance. The roots of this approach are based on the Chinese' yin-yang philosophy, which takes a holistic view of the dynamic and dialectical world. This philosophy takes the universe as a whole and emphasizes the integration of opposing elements (Fang, 2012). Yin-Yang philosophy claims that dualities seemingly oppose or negate each other but are complementary and interdependent, constituting a harmonious whole (Fang, 2005). This indicates that both western and eastern approaches are different in their foundations because the western approach triggers analytical thinking of an "either or" strategy while following a contingency perspective.

In contrast, the eastern approach takes a holistic view of dualities, considering them simultaneously using a "both-and" approach, providing a more synergistic view of dealing with dualities. For instance, when dealing with autonomy versus control duality, the western perspective suggests a control or autonomy approach. On the other hand, the eastern approach considers controlling employees in the long run at a certain level and giving them autonomy.

Based on the Yin-Yang philosophy, Zhang and his colleagues built the foundation of PL conceptualization (Zhang et al., 2015). These researchers view the role of a leader as dealing with the conflicting yet competing demands, or paradoxes, of organizations. They term such leaders paradoxical leaders (PL) and such behaviors paradoxical leadership behaviors (PLB). According to these researchers, PLBs are "seemingly competing, yet interrelated, behaviors to meet structural and follower demands simultaneously and over time." (Zhang et al., 2015, p. 538).

These researchers used "both-and" terminology to describe five behavioral dimensions of the leaders, which are discussed as under:

- Combining self-centeredness with other-centeredness

Self-centeredness implies that power and influence are concentrated with the leader (structural orientation), whereas other-centeredness suggests that leaders have

concern for others. Self-centeredness is an arrogant and unethical stance that nudges a leader toward narcissism (Galvin, Waldman, & Balthazard, 2010). Other-centeredness is more ethical and moral, close to collective leadership principles (Sergi, Denis, & Langley, 2012). Paradoxical leadership (PL) has the potential to synchronize and balance self-centeredness with other-centeredness by showing confidence in abilities and decisions while keeping oneself at the center of attention. On the other hand, PL can demonstrate humbleness and appreciation for others' values (Rosenthal & Pittinsky, 2006), and share leadership with the followers, while simultaneously maintaining central influence (Yang et al., 2021).

- Maintaining both Distance and Closeness

Leaders and followers are embedded in a hierarchical structure where the distance among them is part and parcel of the positional power of the leader. However, according to situational demands, some leaders minimize this distinction of status and establish close interpersonal relationships with followers (Antonakis & Atwater, 2017). But this all depends on how followers perceive a distant leader. For instance, a subordinate may view a distant leader as charismatic, authorized, and more prototypical (Yagil, 1998), while closeness may cause a leader to avoid conflicts and feel difficulty in making tough decisions that may destroy the charisma of the leader (Galvin et al., 2010). So, it is challenging for a leader to maintain close relationships with followers while maintaining hierarchical distance.

- 'Treating subordinates uniformly while allowing individualization.'

Although it motivates subordinates to be treated fairly and uniformly in terms of 'privileges,' 'rights,' and 'status' while avoiding nepotism (Lewis, 2000), this equality may ignore their individuality (Kreiner, Hollensbe, & Sheep, 2006). It is an art to treat them uniformly and uniquely by recognizing their needs and tastes. Treating employees uniquely is the concern of LMX differentiation. Paradoxical leaders can synchronize uniformity and individualism simultaneously (Shao et al., 2019).

- Two dimensions of control and empowerment

Prior research has considered this dimension as the ‘loose-tight principle,’ ‘control versus flexibility,’ ‘control and autonomy,’ ‘discipline and empowerment,’ and ‘authority and democracy’ (Sagie, 1997; Lewis, 2000; Smith & Lewis, 2011). Control and flexibility are related to behaviors, while control and autonomy are concerned with decision-making, thus allowing two types of paradoxes. First, “enforcing work requirements while allowing flexibility” (behavioral control). Secondly, “controlling decisions versus allowing autonomy” (decision-making control). The “Either-or” approach established that some situations demand strict control while others need autonomy (Vroom & Jago, 2007; Srivastava, Bartol, & Locke, 2006), but paradoxical leaders take the “both-and” approach i.e., both control and autonomy simultaneously. A leader must understand the difference and degree to which the boundaries of both opposing poles can be neutralized. PLB simultaneously and dynamically adheres to structural and followers’ demands over time.

2.1.2.1 Paradoxical Leadership: A Comparison with Other Leadership Behaviors

Literature suggests that leadership behaviors are based on two approaches: relationship - oriented and task-oriented. It is also evident that all leadership behaviors are framed by an “either/or” strategy, which is a common agenda among them. However, PL follows a “both/and” strategy framework toward relationship and task-oriented approaches. Following this line of argument, we compared PL and other leadership behaviors. First, transactional leadership is based on the fact that what is being exchanged between the follower and the leader results from negotiation on cost and benefit (Young, Glerum, Joseph, & McCord, 2021). It is a task-oriented leadership style focusing on completing tasks and goals (Islam, Osman, Othman, & Raihan, 2019). Followers are kept motivated on a short-term basis through rewards and punishments. Such leaders are more inclined towards rules and remain very clear about performance standards and expectations from followers. On the other hand, paradoxical leaders keep task and relationship orientations together. Such leaders follow structural demands, maintain hierarchical distance, give autonomy, and maintain close relations with their followers.

Second, transformational leadership elevates followers through autonomy, empowerment, inspiration, motivation, and individualized consideration and gets high-performance outcomes through moral authority ([Amankwaa, Gyensare, & Susomrith, 2019](#)). Such leaders can inspire followers so that they get performance beyond their capabilities. On the relational and task-oriented continuum, this leadership behavior is more inclined toward the relational pole. Paradoxical leadership, in contrast, has a balanced approach between the task and relationship continuums. These leaders give autonomy as well as take structural considerations into account.

Third, situational leadership is based on the two-factor leadership theory, in which a leader follows either task- or relation-oriented behavior depending on situational demands. Assessment of the situation is based on followers' competence and commitment, along with contextual factors ([Thompson & Glasø, 2018](#)). Matching the leader's rating of the follower with the follower's self-rating is the key determinant in this perspective. The fundamental principle is that there is no specific way to lead, and a leader's behaviors change according to the situation to get the best performance results. A PL approach nullifies this method of vacillating between different leadership styles because they may be useful for the short-term. Still, long-term gains are possible if paradoxes are accepted and harmonized simultaneously.

Fourth, a charismatic leader derives authority from charisma. This leadership style is sometimes equaled to transformational leadership because management and applied psychology literature still cannot find any specific definition ([Meslec, Curseu, Fodor, & Kenda, 2020](#)). Charismatic leadership theories inform us that followers are emotionally attached to the leader, who motivates and inspires them with an elevated vision through strong communication, support, direction, and reinforcement, such as through incentives and punishment warnings ([Ho & Astakhova, 2020](#)). Such leaders excite followers by arousing their self-esteem, intrinsic motivation, and valence in relationships. In contrast, paradoxical leaders maintain both distance and closeness with their followers. Such leaders use positional power, authority, and control vested in a hierarchical structure to show closeness, give autonomy, and give individualized considerations and directions.

Fifth, servant leaders are passionate about serving, developing, and elevating followers through support, autonomy, and sacrifice. Such leaders have a close relationship with their followers and prioritize their well-being and growth, leading to high-performance outcomes (Eva, Robin, Sendjaya, Van Dierendonck, & Liden, 2019). They engage followers in ethical, emotional, relational, and spiritual aspects and empower them to become and achieve what they want. They believe in teams and direct their efforts toward building strong teams.

Such orientations are in contrast with PL theory. These leaders believe in self-centeredness along with other-centeredness. They maintain distance while showing close behaviors; they give autonomy while controlling followers on rules and regulations.

2.1.3 Individual Level Mindfulness

Recent years have seen the rise of mindfulness in various corners, such as among organizational leaders, employees, coaches, consultants, and psychologists. The reason could be mindfulness's physical and psychological benefits for various audiences. For instance, clinical psychologists and doctors have implied this technique to cure various illnesses, including anxiety, chronic pain, and depression (Nigol & Benedetto, 2020; Baer, 2003). Recently, organizational researchers took the lead and started exploring the workplace benefits of the construct and found mindfulness as a very important tool for improving 'social relationships, task performance, resiliency, task commitment, enjoyment,' and memory (Glomb, Duffy, Bono, & Yang, 2011; Pagnini, Phillips, Bercovitz, & Langer, 2019). This is why world-renowned companies like Google have started mindfulness programs for their workforce (Hyland et al., 2015).

Mindfulness remained at the core of the Buddhist philosophy of mental training for centuries. Later in the 1970s, mindfulness training gathered momentum as a classical Buddhist strategy for stress relief. Mindfulness combines two important concepts, i.e., "attention" which refers to focusing on a particular thing, idea, or problem, and "awareness," which is considered to be concentrating at the present moment (Quaglia, Brown, Lindsay, Creswell, & Goodman, 2015). Mindfulness is

defined in a variety of ways by different researchers; for instance, [Rosch \(2007\)](#) noted mindfulness as “a simple mental factor that can be present or absent in a moment of consciousness. It means to adhere, in that moment, to the object of consciousness with a clear mental focus” (p. 259). [Kabat \(2005\)](#) defines it as “paying attention in a particular way: on purpose, in the present moment, and nonjudgmentally” (p. 4). Similarly, [Brown, Ryan, and Creswell \(2007\)](#) explain mindfulness as “a receptive attention to and awareness of present-moment events and experiences” (p. 212).

These conceptualizations indicate three common elements: (1) Mindfulness is the ‘quality of focusing on the present moment’ with a central point of “here and now” ([Dane, 2010](#); [Herndon, 2008](#)) and claiming full attention to the present, i.e., devoid of ruminating about the future or past. (2) Mindfulness requires attention to internal stimuli, including feelings, thoughts, conflicts, and body excitements. It also involves ‘paying attention to external stimuli’ such as events, sights, sounds, and smells from the environment. (3) Mindfulness emphasizes ‘paying attention to the stimuli in an open and accepting way, without imposing judgments, memories, or other self-relevant cognitive manipulations on them’ ([K. W. Brown & Ryan, 2003](#); [Glomb et al., 2011](#), p. 119).

This conceptualization enlightens our understanding that mindfulness cultivates clear thinking and non-judgmental openheartedness, improves emotional balance by making individuals more resilient, and ultimately enhances wellbeing ([Asensio-Martínez et al., 2019](#)). This is why it is used as an effective tool to reduce stress and burnout among employees ([Hathaisaard, Wannarit, & Pattanaseri, 2021](#)), translated into better physical and psychological health ([Krick & Felfe, 2020](#)). Systematic reviews of healthcare providers show that healthcare practitioners who are mindful of their normal lives enjoy a great sense of wellbeing. Mindfulness improves their sense of self-care and allows them to manage better their thoughts and emotions ([Di Benedetto & Swadling, 2014](#)).

A debate in literature remained vibrant over whether mindfulness is a trait or a state. Evidence from both sides is more compelling, and literature ultimately summarizes this debate by considering mindfulness as a dispositional element of personality or trait ([Baer & Lykins, 2011](#)) and a state ([Hayes, Strosahl, & Wilson,](#)

1999). As a state, mindfulness comprises a set of skills acquired via therapeutic interventions or meditation. Mindfulness compassionate, and open to experiencing and enjoying psychological wellness (for a review, see [Brown et al., 2007](#)). As a state, mindfulness can be learned through ‘Acceptance And Commitment Therapy’ ([Moran & Ming, 2020](#)), ‘Mindfulness Based Cognitive Therapy MBCT’ ([Rycroft-Malone et al., 2019](#)), ‘Mindfulness Based Stress Reduction MBSR’ ([Chen et al., 2020](#)). Mindfulness practices can also improve affect and mood, e.g., [Crego, Yela, Gómez-Martínez, and Karim \(2020\)](#) found that mindfulness enhances pleasant mood among highly stressed employees after completing a mediation program. [Modinos, Ormel, and Aleman \(2010\)](#) suggested that mindfulness increases the reappraisal of emotional stimuli and neutralizes negative emotional responses. In a review, Schumer, ([Lindsay & Creswell, 2017](#)) also confirmed Modinos and colleagues’ findings and found that individuals who completed a mindfulness training program were less affected by negative emotional stimuli. In addition, mindfulness influences other workplace outcomes, ‘including work engagement, communication skills, productivity, resilience, absenteeism, turnover,’ reduced conflict, creativity, and innovation ([Chaskalson, 2011](#)).

As a trait or dispositional factor, mindfulness is tested by many researchers as a moderator (see, for instance, ([Montani, Setti, Sommovigo, Courcy, & Giorgi, 2020](#); [Liu, He, Wei, Du, & Cheng, 2022](#); [Fan et al., 2022](#)). In a study, [Bajaba, Fuller, Marler, and Bajaba \(2021\)](#) empirically found that trait mindfulness moderated the relationship between proactive personality and both career success and job performance. As a state variable, mindfulness has been tested by many researchers as a mediator. [Keng, Smoski, Robins, Ekblad, and Brantley \(2012\)](#) tested the impact of MBSR on several processes and behavioral regulations via the mediation of state mindfulness and self-compassion. They found that mindfulness and self-compassion successfully mediated relationships.

2.1.4 Team-Level Mindfulness

Many research scholars defined mindfulness in various ways, but their interest remained on the individual side, while team-level conceptualization of this construct

surprisingly remained in the dark (Rusdi & Wibowo, 2022). Brown et al. (2007) defined individual-level mindfulness as “a receptive attention to and awareness of present events and experience” that mainly covers employees’ psychological domain. At the organizational level, mindfulness was considered a set of practices that may enhance individual and organizational level performance, job satisfaction, innovation, PAT, and wellbeing (Lin, Liu, & He, 2020; Martín-Hernández, Ramos, Zornoza, Lira, & Peiró, 2020). In contrast, mindfulness reduces NAT, turnover intention, emotional exhaustion, and stress (c.f., Victorson et al., 2020; Qian, Yuan, Lim, Niu, & Liu, 2020; Lu et al., 2019).

This gap was noticed and attempted by Yu and Zellmer-Bruhn (2018), who, in a multi-wave field study, operationalized the team-level mindfulness construct, developed its scale, and found that team-level mindfulness is inversely associated with relationship conflict. These scholars found that team-level mindfulness smoothens the negativity of relationship and task conflicts. This pioneering study is a curtain-raiser in the field of mindfulness and defines team-level mindfulness as:

“A shared belief among team members that team interactions are characterized by awareness and attention to present events, and by experiential, nonjudgmental processing of within-team experiences” (Yu & Zellmer-Bruhn, 2018)

Team-level mindfulness is based on team experiences and differs from individual-level mindfulness based on its structure and composition (Yu & Zellmer-Bruhn, 2018; Morgeson & Hofmann, 1999). Team-level mindfulness considers the same elements of ‘attention’ and ‘nonjudgmental experiential processing’ (Good et al., 2016; K. W. Brown & Ryan, 2003), but its conceptualization differs from individual-level mindfulness. This construct considers team-level collective perspectives and incorporates collective thoughts and cognitive elements. Attention is awareness of the present situation or moment, i.e., “sustained and concentrated” attention on what’s happening now and not about future or past issues or demands (Smallwood & Schooler, 2015), but paying attention on purpose. Non-judgmental experiential processing is concerned with being open and nonjudgmental, and it reflects ‘open-minded curiosity, being kind’ with compassionate intent (Yu & Zellmer-Bruhn, 2018). Experiential processing propels individuals to analyze information without

being judgmental or attaching labels. It is distinguished from conceptual processing, which involves thoughtfully categorizing, labeling, evaluating, or attributing. Experiential processing entails simply noticing and allowing something to pass without evaluating it.

Good et al. (2016) noted that individual-level mindfulness could be a ‘trait, ‘state,’ and/or a ‘practice’. The practice view is linked with ‘meditation, whereas trait and state approaches consider it a “quality of mind.” Yu and Zellmer-Bruhn (2018), in their seminal work, proposed team-level mindfulness as a “quality of mind” where individuals are taken as “units of agency,” and mindfulness is grabbed through behaviors and inferred via self-reports (Davidson, 2010). Moreover, team-level mindfulness is a ‘shared cognitive state’ developed in team members with experience and is a team-level property. Therefore, responses grabbed ‘at the individual level’ cannot be aggregated to capture team-level mindfulness. Still, it is a collective cognitive process developed through interaction between members of the teams. It is a combined opinion about the quality of the “team mind” developed using interaction among team members.

Team-level mindfulness has been recently introduced in literature; hence, we have limited knowledge about this very important workplace phenomenon. A few studies claimed that team-level mindfulness influence team commitment (Rusdi & Wibowo, 2022), employees’ moral efficacy (Li & Ren, 2021), ‘work engagement’ (Liu, Xin, Shen, He, & Liu, 2020), relationship conflict, and social undermining (Yu & Zellmer-Bruhn, 2018). Some studies also noted the buffering role of team-level mindfulness (see Liu, Wang, et al., 2020), but nothing could be claimed with confidence.

Teams are collections of people with similar but competing goals who have different opinions, levels of knowledge, and skills; therefore, they are more prone to task conflicts and relationship conflicts. Moreover, incompatibility and differences among team members breed negative emotions and undermine performance. Negative emotionality triggers competitive reactions, fuels conflict, and distracts teams from tasks; as a result, task conflicts are transformed into relationship conflicts (Van Kleef, 2010; Weingart, Behfar, Bendersky, Todorova, & Jehn, 2015; Yang & Mossholder, 2004), which are detrimental to performance. Team-level

mindfulness provides present focus, which enhances attentional stability and control, lowers distractions from tasks, prevents over-investment in irrelevant stimuli (task conflict), and leads to neutralizing intense feelings. Moreover, open and non-judgmental experiential learning (a dimension of team-level mindfulness) lowers personalization and reactivity (Good et al., 2016), which makes a mindful team less likely to experience relationship conflict. It leads to disagreement without opposition and reduces affect-based responses such as retaliation (Yu & Zellmer-Bruhn, 2018), and hence is considered a good moderator.

2.1.5 Innovative Work Behavior (IWB)

Employees' Innovative Work Behavior (IWB) promotes continuous innovation, which is vital for an organization's growth and survival in such a complex environment (Rafique, Hou, Chudhery, Gull, & Ahmed, 2021). Innovation gathered mass in communication, administrative science, sociology, and psychology. Later, it was introduced in management literature, and interest in innovation has gained momentum over the last thirty years. Now it has become a pressing concern for every organization. According to Baregheh, Rowley, and Sambrook (2009, pp. 1334), "Innovation is the multi-stage process whereby organizations transform ideas into new/improved products, services, or processes to advance, compete, and differentiate themselves successfully in their marketplace." Whereas, 'Amabile (1996)' described innovation as the "successful implementation of creative ideas within an organization." So, both definitions clarify the two focal processes, idea generation and implementation. Moreover, it deals with the broad spectrum of organizational life and processes, such as ideas, solutions to problematic situations, processes, products, and services. It has the remarkable potential to elevate an organization above its competitors.

Organizations are the embodiment of individuals with different capabilities and skills. Employees have the privilege to generate and implement new ideas in organizations (Purc & Laguna, 2019); therefore, it is evident that innovation is the outcome of employees' innovative efforts called IWB (King & Anderson, 2002). Many research scholars defined IWB in a variety of ways. For instance, Kwon and

Kim (2020) defined IWB as “the intentional proposal and application of novel and improved ideas, processes, practices, and policies aimed at organizational effectiveness, business success, and long-term sustainability” (p. 3), which is in line with Janssen (2000). Similarly, (Abdullah, Rozeyta, & Panatik, 2016) considered IWB as “developing, adopting, and implementing new ideas for products and work methods in the organization” (p. 179). Similarly, Scott and Bruce (1994) presented a conceptualization of IWB based on three dimensions: idea generation, idea championing, and finally, implementation of the idea. Hence, despite the multiple definitions of IWB, consensus can be seen on two broad facets, i.e., idea generation and idea implementation.

IWB is similar yet distinct from its sister concepts, such as creativity. Creativity is hooked up with new ideas, whereas innovation is considered a sociological process that deals with not only idea generation but also idea implementation in organizations. Innovation is an inter-individual activity that deals with idea execution, involving sociological aspects and inter-individual processes (idea generation). Moreover, innovative behavior is an ongoing activity that occurs before, during, and after the innovative process (Scott & Bruce, 1994). Multiple reviews on IWB suggest that IWB is a multistage process such as ‘problem recognition,’ ‘idea generation,’ and ‘idea implementation’ (see, for instance Li, Zheng, et al., 2014; Bos-Nehles, Renkema, & Janssen, 2017). However, creativity is limited to problem identification and idea generation only.

Dynamism and change are the permanent features of the current environment that can be managed through innovative investments. Although incremental improvements and radical change are different in their nature and requirements, IWB is identified with both of them (Axtell et al., 2000). Incremental improvements are concerned with the employees working in all domains of an organization and are taken as a routine business. At the same time, radical change is a specialized plan carried out by employees working on a research development project (Dörner, 2012). Dörner (2012) threw out the idea that IWB is also necessary for routine business (incremental change) because it is linked with ‘exploring ways to use new technology, bringing in new work methods, and other resources necessary to implement useful’ ideas successfully. This was done to dispel the myth that innovation

is only needed for radical change. But IWB is not part of the job description for routine tasks; it is considered an extra role behavior associated with the discretion of employees (Kim, 2022).

IWB is a collection of behaviors associated with all stages, from idea generation to the creation of useful products (Ayoub, Almahamid, & Al Salah, 2021). Idea championing is the next stage, where employees promote ideas to get support (Sergeeva & Zanello, 2018); the final stage is implementation, concerned with implementing the novel ideas for the organization's benefit (De Jong & Den Hartog, 2010). This debate suggests that IWB is crucial for not only radical change in the organization but also effective functioning and competing in such a volatile environment.

Previous research has extensively studied the antecedents of IWB, for instance, HR systems and 'psychological empowerment (Rehman, Ahmad, Allen, Raziq, & Riaz, 2019),' transformational leadership (Afsar & Umrani, 2019), ethical leadership (Dhar, 2016), knowledge sharing (Hussain et al., 2018), challenge stressors (Ren & Zhang, 2015), information sharing (Battistelli, Odoardi, Vandenberghe, Di Napoli, & Piccione, 2019), LMX and engagement (Saeed, Afsar, Cheema, & Javed, 2018). The impact of Islamic work ethics on adaptive performance was explored by Javed et al. (2017) using IWB as a mediating factor and ethical leadership as a moderating factor. Few researchers, however, have discovered various effects of IWB. Aryee, Walumbwa, Zhou, and Hartnell (2012) investigated the mediation role of IWB in the relationship between 'transformational leadership and task performance.

2.1.6 Team Creativity

Creativity is "the production of new and useful ideas" (Amabile, 1996). Creativity is a broad concept that spans three broad perspectives: problem-solving, searching for novel ideas or products (innovation), and focusing on outcomes. Still, researchers generally follow one perspective for creative attempts. First is the problem-solving process, which comprises the identification of the problem, searching for solutions, formulating hypotheses, and communicating results (Torrance,

1966, p. 6). Second, seek novelty or innovation by discovering a new idea or product while rejecting the existing one (Hennessey & Amabile, 2010) or improving an existing idea with a new insight. Third, creating or delivering high-quality outcomes (Chen, 2006), which could be a new paradigm in literature.

An organization is a social network of individuals with diverse skills and abilities dispersed into different teams. Organizational success depends on teams' performance, so fostering creativity in teams is vital for the survival and growth of any organization. Team creativity is a collective phenomenon where members experiment with new behaviors, ideas, and emotions. Team members develop products and processes, ideas and techniques, and take novel approaches to their work (Gilson & Shalley, 2004). *It is defined as the "generation of creative solutions among a group of individuals working interdependently on one team task"* (Shalley & Zhou, 2008; Woodman, Sawyer, & Griffin, 1993).'

Creative collaboration has become crucial to organizations in an increasingly competitive and globalized economy. Organizations place a high emphasis on creative collaboration to spur innovation, prevent organizational stagnation and decline, and increase revenues and capabilities. Instead of focusing on each member to get creative results, collaboration among and between teams is more useful to foster and enhancing creative potential.

Although team creativity is a more recent topic of study, the 1950s saw a burgeoning interest in this area. Researchers first referred to creativity in producing new products and services between the 1970s and the 1990s (Amabile, 1996). Still, this terminology eventually expanded by incorporating processes required for creativity. Despite advances in this field, team creativity literature on how teams can achieve their full potential is still in its infancy. Zhang and Bartol (2010) developed a creative team process related to team productivity and innovation. According to this conceptualization, the creative team process is dissolved into three stages: (1) "problem identification," (2) "information searching and encoding," and (3) "idea and alternative generation." These researchers suggested individual involvement and engagement as the key elements for a successful creative process. In private firms, teams' creative processes emerge from a bottom-up approach. Dominant researchers investigated individual-level factors that foster creativity and innovation

in-group members. Recently, some scholars also extended individual-level creativity to the team level and ‘found some individual characteristics and contextual factors’ that contribute to team creativity (see, for instance [Gong, Kim, Lee, & Zhu, 2013](#)), yet these efforts are fragmented and scarce. [Amabile \(1983, 1988\)](#) suggested individual dispositions such as creative abilities, task-related skills, and motivation as sources of team creativity. Individual skills and capabilities are fundamental to generating creative ideas, which are synthesized at the team level more productively through collaboration and coordination. This conceptualization directed the attention of scholars toward considering team composition, coordination, and collaboration as important antecedents of team creativity (e.g. [Mathieu, Tannenbaum, Donsbach, & Alliger, 2014](#); [Humphrey & Aime, 2014](#)). According to researchers, teams with diverse memberships are more effective in creative endeavors ([Bodla, Tang, Jiang, & Tian, 2018](#)).

Furthermore, literature on team creativity has proposed several collective processes that affect team creativity, ranging from cognitive to motivational domains. Prior research has noted different processes such as information sharing, information exchange, information elaboration, knowledge integration, team learning, task conflicts, etc. ([Madrid, Totterdell, Niven, & Barros, 2016](#); [De Dreu, Bechtoldt, & Nijstad, 2006](#); [Hoever, Van Knippenberg, Van Ginkel, & Barkema, 2012](#); [Gebert, Boerner, & Kearney, 2010](#); [Miron-Spektor, Erez, & Naveh, 2011](#)). Further, research has also elucidated organizational culture (such as leadership styles, psychological safety, team creative climate, help-seeking and help-giving behaviors etc.) as an important factor stimulating team creativity.

2.1.7 Negative Affective Tone (NAT)

Emotions and affective processes have claimed an important place in human lives. People experience a wide spectrum of emotions in their intimate relationships and social contexts. Other disciplines, such as sociology and psychology, started debating this important segment very early, but management literature adopted it in the 1990s. While discussing affective processes, researchers remained unclear on how to differentiate between affect, emotion, mood, and feelings, so these terms

have been used interchangeably (Palmero, Guerrero, Gómez, & Carpi, 2006). Still, after a long period of research, this controversy was resolved, and the affect was defined as:

“Feelings, moods, emotions, and sympathetic nervous system activity that people have experienced in relation to an attitude object and subsequently associated with it” (Eberth & Sedlmeier, 2012, p. 272)

Affect is associated with physiological processes that involve valence (i.e., positive or negative) and intensity (Russell, 1983). These two dimensions are linked to neurophysiological and biological components. Affect is usually directed towards external or internal aspects, for example, situations, people, or objects. The duration of affective state is difficult to determine, but they are expected to last longer than any other affective process. Mood is also a particular affective process characterized by two dimensions, i.e., valence and intensity, but unlike affect, the duration of mood is short, such as hours or days. Palmero et al. (2006) describe the mood as “the existence of a set of beliefs about the probability of a subject experiencing pleasure or pain in the future; that is, experiencing positive or negative affect” (p. 17).

On the other hand, emotions are multidimensional responses to external or internal stimuli (Palmero et al., 2006), which are spontaneous and intense and last for a shorter time than affects and moods. Researchers have coined emotions such as anger, fear, sadness, happiness, and disgust. Moreover, emotions can be classified into primary/basic and secondary categories (Bloch, 2002), where primary emotions (e.g., happiness, sadness, and surprise) are universal and inherent (Izard, 2013), and the secondary emotions (e.g., gratitude, envy, and ambition) are developed socially. Emotions are physically exhibited through expression. Ekman (n.d.), in a cross-cultural examination, linked a small set of basic emotions to facial expressions. Other emotional expressions include verbal communication and voice intonation (Owren & Bachorowski, 2007).

Feelings are a subjective component of emotions and are higher-order constructs than emotions, affects, and moods. The manifestation of feelings is linked with the awareness of emotions, i.e., when a person becomes aware of his emotions,

particular feelings emerge, which means emotions precede feelings. Feelings are expressed in a particular way, for instance, “I’m happy,” “I’m sad,” etc. Cultural and social norms play a vital role in expressing feelings. For instance, sometimes one recognizes a negative affective state but portrays the contrary (e.g., “I am fine”); (Gross & Levenson, 1997). Unclear emotions or internal affective state leads to confusion (fig. 2.1).

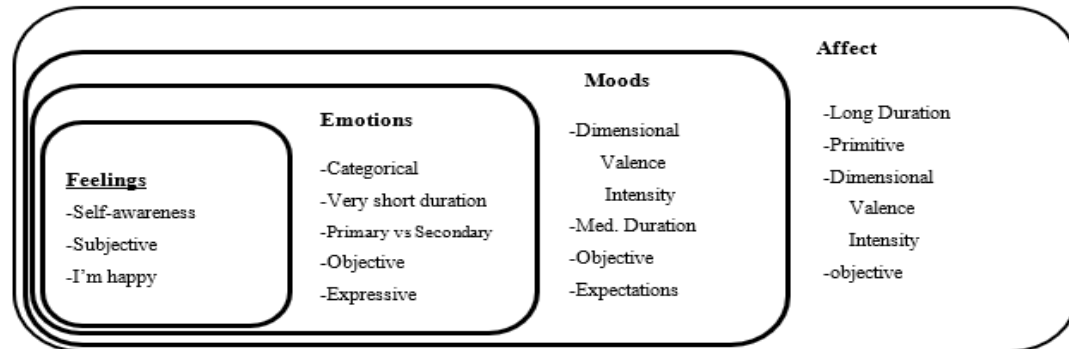


FIGURE 2.1: Hierarchical Structure of the Affective Process

Extensive research suggests PAT and NAT as two broad streams of affect ‘(Watson & Clark, 1984; Watson, Clark, & Tellegen, 1988).’ PAT and NAT are not opposite poles but are unique and interrelated, meaning that a person high on negative affectivity (e.g., anxiety) might simultaneously experience excitement or joy (Watson & Clark, 1984). Moreover, both PAT and NAT can be measured as traits ‘(dispositional factors) or states (i.e., transient fluctuations in mood).’ “Negative Affect Tone (NAT) denotes subjective distress and spreads over a broad range of negative moods, including fear, anxiety, hostility and disgust, etc. At the trait level, NAT is a predisposition to experience negative emotions that further influence self-concept and world view” (Watson et al., 1988).

On the other hand, PAT is a pleasurable engagement with the environment that reflects energy level, enthusiasm, mental alertness, determination, joy, and interest. PAT as a trait is a predisposition associated with positive emotional experience and reflects well-being, competence, and interpersonal engagement.

NAT is a very pervasive disposition and can be experienced without overt stress. It means that individuals with NAT are sensitive to minor negative events of daily life and may experience a high level of NAT even if no apparent stressor is

experienced. NAT is a subjective and conscious experience, i.e., subjects know only their feelings about themselves and the world but are unaware of how to handle negative situations (Watson & Clark, 1984). Further, NAT corresponds to individual differences; for instance, neurotic individuals can easily become the target of severe mood swings, worry, sadness, and disturbance and are prone to mental disorders (Jeronimus, Kotov, Riese, & Ormel, 2016).

Based on broaden and build theorization (Fredrickson, 2001), some researchers argue that PAT predicts positive outcomes because positive emotions help build resources that lead to adaptive benefits, while NAT yields negative outcomes. Prior research provides evidence that PAT broadens the attentional span and positively affects the thought–action repertoire, enabling individuals to devote more resources to the current work (Fredrickson, 2001), and increases performance. Whereas NAT narrows down thought–action repertoire (Fredrickson & Branigan, 2005), such individuals pay less attention to ongoing tasks because their resources are momentarily decreased, lowering performance.

Lee and colleagues, for example, tested NAT as a mediator between LMX ambivalence and performance relationships in an empirical study and discovered that NAT decreased employees' performance but that the perception of support reversed this relationship (Lee, Thomas, Geoff, et al., 2019). Similarly, Gillet, Vallerand, Lafreniere, and Bureau (2013) also tested affect as a mediator between motivation-performance relationship and found that both 'controlled motivation' and 'amotivation' yield negative affective responses. According to Ashkanasy (2002), PAT can lead to various beneficial effects, including higher job satisfaction, lower turnover, pro-social conduct among coworkers, better performance, and higher levels of creativity. Employees with NAT, on the other hand, are less satisfied, have more withdrawal symptoms, and have a lower level of creativity.

A dual-tuning model by J. M. George and Zhou (2007) contends that creativity is a joint function of positive and negative emotions. Later, the dual-tuning model was enhanced by Bledow, Rosing, and Frese (2013), who also put forth the Affective Shift Model, which contends that creativity results from the interaction between negative and positive emotions. According to the researchers, creativity begins as an initial instance of NAT, gradually fading away while PAT

concurrently rises to lead to more innovative thinking. Further, considering the Mood-as-information perspective, a cohort of researchers found that NAT, under certain conditions, enhances creativity (e.g. [G. Kaufmann, 2003](#); [Kaufmann & Vosburg, 1997](#); [Gasper & Clore, 2002](#); [J. M. George & Zhou, 2002](#)). For example, [Kaufmann and Vosburg \(1997\)](#) proposed that negative moods are the source of superior creative problem-solving than positive moods. [Vosburg \(1998\)](#) proposed that positive moods enhance performance by encouraging divergent thinking using satisfying strategies, while negative moods facilitate creative problem-solving using optimizing strategies. As a result, this inconclusive empirical evidence directs researchers' attention toward more rigorous studies.

2.2 Hypotheses Development

2.2.1 Paradoxical Leadership and IWB

Lewis defines paradox as “contradictory yet interrelated elements that seem logical in isolation but absurd and irrational when appearing simultaneously” ([Lewis, 2000](#)). PL, according to [Zhang et al. \(2015\)](#), is developed through (1) holistic thinking, i.e., having a holistic view above all contradictions, (2) integrative complexity, i.e., having a clear understanding of paradoxes and the ability to create synergies; and (3) organizational structure, i.e., the impact of organic structure that helps develop this kind of leadership. These capabilities of a leader instill three types of behaviors in followers: (1) task proficiency; (2) adaptive behavior, and (3) proactive Behavior.

Paradoxical literature suggests that contradictory demands from paradoxical leaders promote complex thinking, enabling individuals to ponder different alternatives to reduce tensions. Following the same line of reasoning, [Miron-Spektor, Gino, and Argote \(2011\)](#) suggested that paradoxical frames continuously urge employees to respond to creativity. Moreover, [Rothman and Melwani \(2017\)](#) noted that conflicts are the main source that sparks cognitive flexibility, which is an important ingredient of creativity. [Rosing, Frese, and Bausch \(2011\)](#) proposed that a leader's

opening and closing behavior increases and decreases employee variance, which results in the manifestation of IWB.

Furthermore, drawing upon the social learning and vicarious learning perspectives, leaders' behaviors are taken as role models for followers. Leaders' behaviors and outcomes are observed by followers, which are later reflected back in their behaviors (Manz & Sims Jr, 1981). Following this line of argument, it is suggested that a PL, through role modeling, may enhance followers' innovative behavior (Ishaq et al., 2021). A paradoxical leader allows followers to observe work environment challenges with an open mind, develop a better understanding of the situations, and imitate desired behaviors to deal with such challenges, which improves innovative performance (Sims Jr & Manz, 1982).

Paradoxical leaders provide flexibility and autonomy to their followers, which gives them a sense of responsibility and the confidence to experiment and deal with novel solutions (Shao et al., 2019). Since innovation is inherently risky, such leaders, by providing decision latitude and autonomy to the followers, give them the opportunity to handle changing environmental conditions with full confidence and without the fear of failure. As a result, followers take initiatives and exhibit innovative behaviors.

Drawing upon 'Affective Event Theory (AET),' which postulates that environmental factors have the potential to influence attitudes and behaviors (Weiss & Cropanzano, 1996). Leadership is seen as a very important environmental factor that influences followers' attitudes and behaviors. It is argued that paradoxical demands from a leader serve as an environmental factor that alerts and motivates followers to respond differently. A paradoxical leader conforms to roles and rules to meet deadlines and show strict adherence to regulations but, side by side provides followers flexibility and autonomy to openly discuss and coin innovative ideas and solutions to the problem. These paradoxes alert their followers to the situation's complexities, prompting them to respond with novel behaviors.

These findings and arguments help us establish the following link:

H₁: PL is positively related to IWB.

2.2.2 Paradoxical Leadership and LMX Ambivalence

A paradoxical leader simultaneously demonstrates behaviors that are ‘contradictory but interrelated’ to meet many work demands. [Zhang et al. \(2015\)](#) operationalized a paradoxical leader’s behavior using the “both/and” approach and elaborated that a leader enjoys a central place in decision-making but also gives freedom of decision-making to the team members when the occasion demands. A leader maintains the distance to meet structural needs but also shows closeness with the team members. Such leaders control their followers when strict deadlines are waiting to be met but also give flexibility and autonomy.

Such paradoxes can trigger ambivalence if contradictory elements foster opposite orientations towards a particular object ([Ashforth et al., 2014](#)). In a leading article, [Lewis \(2000\)](#) established that paradoxical demands from leaders foster tensions and conflicts, which may create ambivalence. PL has only recently been introduced in the literature, and the impact of such behaviors has not been thoroughly discussed ([Ishaq et al., 2021](#)). For the first time, this study establishes the link between PL and LMX ambivalence.

LMX ambivalence is the tension between experiencing high and low-quality relationships with a leader simultaneously ([Lee, Thomas, Geoff, et al., 2019](#)). Previous research has shown that ambivalence breeds within close relationships ([Fuller, Ajrouch, & Antonucci, 2020](#)). In the organizational domain, [Oglensky \(2008\)](#) argued that mentor-protege relationships are close, based on loyalty and mutual expectations, and are ambivalent by nature. Loyalty is characterized by attachment, is based on trust and mutual expectations, and is considered an essential factor in emotional involvement. According to research, the mutual trust, respect, and loyalty that a leader and a follower maintain at times are at the heart of LMX quality ([Graen & Scandura, 1987](#); [Graen & Uhl-Bien, 1995](#)). This can be jeopardized by competing paradoxical demands from a leader that cause confusion, tension, and make relationships ambivalent.

The social information perspective claims that individuals’ attitudes, behaviors, and cognitions are developed based on information or cues from their immediate social environment ([Salancik & Pfeffer, 1978](#)). The social environment signals what

behaviors are acceptable and what expectations are placed on these behaviors. Studies show leaders are vital environmental factors who can send social cues (Pengs, M. Schaubroeck, Chong, & Li, 2019). In the LMX relationship, role-making is the fundamental responsibility of a leader (Han, 2020). Leaders signal expectations during the rule-making process to establish a high or low-quality relationship with followers in the future. Paradoxical leaders may send ambiguous or inconsistent expectations through paradoxical cues that create confusion and tension among followers.

For instance, paradoxical leaders expect strict adherence to rules and regulations from their followers and show authoritarian behaviors to get performance results (Chen & Weng, 2022). Followers are expected to conform to organizational norms and values, which may be reflected in low-quality LMX relationships. On the other hand, leaders expect out-of-the-box thinking and solutions from the followers to cope with changing environmental requirements, show flexibility and provide autonomy to the followers, which may be taken as a high-quality LMX relationship. The leader maintains the distance to conform to structural requirements while simultaneously showing closeness and empathy to obtain extra-role behaviors. Hence, these paradoxical behaviors from a leader may lead to LMX ambivalence.

Moreover, Pratt and Doucet (2000a) established that LMX relationships are ambivalent due to dualities, which are the source of tensions between individual and collective, and between competing values and roles. Similarly, Guarana and Hernandez (2015) proposed that dualities and uncertainty are the sources of relational ambivalence. In another investigation on CEOs, Plambeck and Weber (2010) indicated that environmental paradoxes (such as from a leader's paradoxical demands) generate cognitive load in followers that lead to ambivalence.

AET determines that environmental factors lead to work hassles or uplifts and impact attitudes and behaviors (Weiss & Cropanzano, 1996). As an important environmental factor, paradoxical leadership displays paradoxical cues and behaviors. They control followers through regulations, and gives them autonomy and flexibility to openly examine, discuss, and analyze complex situations for out-of-the-box solutions. Such inconsistent behaviors and expectations from the leader

create uncertainty, complexity, and ambiguity. When leaders exhibit exploitative behaviors, followers believe they have a low-quality LMX relationship with the leader. When the leader shows exploratory behaviors and expectations, followers consider them to have a high-quality LMX relationship with the leader. This chaos causes followers to experience both the high and low quality of LMX, a phenomenon known as LMX ambivalence.

Based on the literature, theory, and argument, it is hypothesized that:

H₂: Paradoxical leadership is positively related to LMX ambivalence.

2.2.3 LMX Ambivalence and IWB

LMX ambivalence—the experience of high and low-quality relationships towards the leader simultaneously (Lee, Thomas, Geoff, et al., 2019) is classified as both attitudinal and relational ambivalence. In the relationship domain, the debate over ambivalence is still undecided due to contradictory perspectives spelled out by esteemed scholarship. For instance, Lee, Thomas, Geoff, et al. (2019) empirically established the negative impact of LMX ambivalence on performance. Research also suggests that ambivalent relationships are ‘unpredictable’ and are associated with ‘increased stress’ (Uchino et al., 2007).

While scholars on the other side argued that ambivalent individuals in “relationships may be better able to collaborate, overcome competition, exchange information” and perform better at work (Ingram & Roberts, 2000; Rothman & Northcraft, 2015; Zou & Ingram, 2013). Guarana and Hernandez (2015) suggested that ambivalent dyadic relationships may produce mutually functional outcomes. Such individuals share ideas, cooperate in solving problems, and contribute to the cognitive processing process. Although these relationships are stressful, they also promote trust and sympathy (Ingram & Zou, 2008) and demonstrate commitment by embracing the costs and rewards that such relationships entail (Bushman & Holt-Lunstad, 2009).

Furthermore, Zhao and Zhou (2021) suggest two perspectives related to the outcomes of ambivalence. First is the stressor perspective, which is regarded as a

threat to resource loss and produces negative outcomes. Second is the paradox perspective, which observes ambivalence as an opportunity to acquire resources and yield beneficial outcomes. These researchers consider ambivalence as the source of seeking more information, opinions, or guidance due to paradoxical cues from the leader (Zhang et al., 2015). It enhances cognitive and behavioral flexibility and helps them show proactive behaviors such as innovative behaviors.

Although Fong (2006) established in an experimental study that emotional ambivalence enhances creativity, studies on the dyadic perspective of ambivalence are sparse, especially in management literature we have limited knowledge about the phenomenon (Methot et al., 2017). It is argued that LMX ambivalence due to paradoxical cues of high and low cognitions about the leader enhances sensitivity to the environment, which broadens cognitive flexibility. Such individuals consider balanced perspectives of divergent information from their surroundings, which allows them to generate new and better alternatives (Rothman & Melwani, 2017). So, our discussion leads us to hypothesis3:

H₃: LMX ambivalence is positively associated with IWB.

2.2.4 LMX Ambivalence and Negative Affective Tone

Ambivalence towards relationships generally engenders negative consequences because relationships are considered a large investment of the ‘self’ which entails hot cognitions towards relationships (Pratt & Doucet, 2000a). Past researchers have been persistent in acknowledging an inverse relationship between relational ambivalence and performance (e.g., Lee, Thomas, Geoff, et al., 2019), emotions (Van Harreveld, Rutjens, Rotteveel, Nordgren, & Van Der Pligt, 2009), and well-being (Fingerman, Pitzer, Lefkowitz, Birditt, & Mroczek, 2008). In the context of attitude, Eagly and Chaiken (1998) defined “affect” as “feelings, moods, emotions, and sympathetic nervous system activity that people have experienced concerning an attitude object and subsequently associated with it” (p. 272). Although affective reactions are a natural result of ambivalence, research in this area is limited and needs to be expanded (Methot et al., 2017).

Literature generally suggests NAT is the consequence of ambivalence (e.g., Van Harreveld et al., 2015; Van Harreveld, Rutjens, Schneider, Nohlen, & Keskinis, 2014; Tsai & Lu, 2019). According to Higgins (1987) self-discrepancy theory, ambivalent individuals experience a discrepancy between their actual attitude (ambivalent) and their ideal attitude (univalent), which can lead to a negative affective response. The reason is that humans have the motivation and tendency to be consistent. LMX ambivalence moves individuals towards bivalent cognitions of high and low-quality relationships with the leader, violating the basic principles of consistency (Festinger, 1957) and resulting in negative emotional responses.

Ingram (2015) maintained that negative emotional events with supervisors are due to goal constructions without mutual consideration; competing goals may evoke negative evaluations and affective responses. In a study, Lee, Thomas, Martin, and Guillaume (2019) found that LMX ambivalence leads to NAT and has detrimental effects on performance. Based on theory and argument, following hypothesis can be proposed:

H₄: LMX ambivalence is positively related to negative affective tone

2.2.5 Negative Affective Tone (NAT) and IWB

There is almost a consensus on the beneficial outcomes of positive affect in literature, but negative affective states are not free from contradictory evaluations. For instance, many scholars confirm that creativity and innovations are derived from positive affective states (Madrid et al., 2014) because the affect-as-information model explains that positive affective states signal individuals about the opportunities to be explored. These positive moods broaden the cognitive focus and promote divergent thinking (Madrid & Patterson, 2018), which is the core element of innovation.

On the other hand, research on NAT unfolds deleterious effects on health and performance (Birnbaum et al., 2010; MacIntyre, Gregersen, & Mercer, 2020; Oh & Tong, 2020; Lee, Thomas, Geoff, et al., 2019). Although some researchers pointed out positive outcomes of negative feelings, such as (J. M. George & Zhou, 2002), who advocated innovation as an outcome of NAT under certain conditions,

the tilt of the literature remained on the other side of the argument. This is why [Montani et al. \(2018\)](#) have to call for more investigations.

In case of a direct link between NAT and IWB, it is argued that NAT, as the main source of stress, consumes energy and psychological resources, narrowing the attentional focus and sparing a person from being logical, hindering creativity ([Baumann & Kuhl, 2002](#)). An individual in a negative affective state process biased information sees only one side of the picture and adopts avoidant behavior rather than approach tendencies, discouraging positive investments in the innovative process ([Rietzschel, 2011](#)) and hence moves away from goal accomplishment. These arguments drive us toward the following hypothesis:

H₅: Negative affective tone is negatively related to IWB.

2.2.6 Paradoxical Leadership and Team Creativity

Creative and innovative employees are the real source of competitive advantage for every organization. They work in different capacities, at different levels, and in different teams. Organizations require them to demonstrate creative behaviors not only in individual capacities but also in teams. So, relying on teams helps organizations increase creativity by fostering the cross-fertilization of ideas from many sources. Different team members debate the pros and cons of every alternative to reach a greater and superior solution. But instilling creativity in teams has become a real challenge for researchers and practitioners ([Kearney & Gebert, 2009](#)). Literature has recently acknowledged creativity as a multilevel construct and admitted that factors contributing to team creativity are not fully understood ([Li et al., 2018](#)).

Team creativity is the generation of new ideas about products, services, or procedures by the team with new perspectives combining existing unrelated elements into something new and better ([Amabile, 1988](#)). It is a complicated phenomenon requiring key strategic resources and autonomy to generate creative ideas ([Martins & Terblanche, 2003](#)). Therefore, the role of a leader becomes vital who can provide such support, encouragement, autonomy, and key resources to team members to take initiative and exploring novel solutions ([Jiang & Chen, 2018](#); [Zacher &](#)

Rosing, 2015). Previous research has suggested different leadership styles, such as inclusive leadership (Jia, Jiao, & Han, 2021), transformational leadership (Jiang & Chen, 2018), and servant leadership (Wang, Guan, Cui, Cai, & Liu, 2021), that foster creativity among teams. But these leadership styles are not specific to managing and nurturing creativity. Researchers also suggested paradoxes as the crux for creativity and innovation (Shao et al., 2019) and were probing a leadership style that transforms paradoxes into creativity and innovation.

Research has explored a paradoxical leadership style that handles paradoxes and specifically promises creativity and innovation at all levels, but little empirical evidence is available in this domain. A paradoxical perspective implies tensions dealing with competing “demands, processes, and perspectives” persisting over time (Schad, Lewis, Raisch, & Smith, 2016). Paradoxical theory suggests that these tensions serve as a double-edged sword, i.e., they can enhance creativity and sustainability but also increase anxiety. To foster creativity and innovation, the paradox perspective requires individuals to break the rules as well as observe boundaries and constraints, work with zeal and blood but in a disciplined way, apply divergent and convergent thinking, and be flexible as well as persistent (Shao et al., 2019; Andriopoulos & Lewis, 2009).

Paradoxical leaders’ behavior simultaneously incorporates competing yet interrelated demands. These demands help to inculcate task proficiency and adaptive and proactive behaviors among team members (Zhang et al., 2015), thereby controlling subordinate behaviors while giving them the liberty to act and decide freely. Followers become capable of understanding their role, open their minds to new experiences such as crises, stress, and work uncertainties, and are self-directed to take initiatives for change. This leads to creativity at the individual and team levels (Zhang et al., 2015).

Moreover, following the identity perspective, a paradoxical leader creates a supportive work environment by providing for followers’ personal needs, elevating their self-esteem, and motivating them to face challenges that uplift their identification from a personal to a collective level; hence, they show extra-role behavior such as creativity or innovation (Zhu, Sosik, Riggio, & Yang, 2012). In meeting structural requirements, the leader, on the other hand, emphasizes rule compliance, focuses

on rewards for correcting performance, takes corrective actions, clarifies organizational norms and values, and harmonizes personal and organizational values, all of which contribute to extra-role behaviors (Zhu et al., 2012).

As paradoxical demands create conflicts and tensions (Lewis, 2000), conflict literature suggests two types of conflicts, i.e., “task conflict” and “relationship conflict.” Task conflict refers to tensions and disagreements that arise from task-related issues, whereas relationship conflict is associated with personalized disagreement. According to studies, relationship conflict is deleterious to performance and creativity, while task conflict has a positive influence (Guenter et al., 2016). Task conflict encourages diverse thinking by discouraging premature team consensus (De Dreu & West, 2001), contributing to innovative performance (Farh, Lee, & Farh, 2010). It is argued that paradoxical demands create task conflict because of their association with work-related matters, enhancing team creativity.

Moreover, Zacher and Rosing (2015) established that a leader’s focus on exploration and exploitation predicts team innovation. They further maintained that during exploration, leader show opening behavior for experimentation, divergent thinking, and openness to new information, which breed new ideas. On the other hand, during the exploitation phase, the leader shows closing behavior to focus on rules, standards, and clear goals, which results in team innovation. More recently, (Li et al., 2018) proposed that PL encourages divergent/paradoxical thinking to adopt a ‘both-and’ approach and enhances work engagement and team creativity.

Further, AET (Affective Event Theory) also supports the premise that PL enhances team creativity. The theory posits that work events from the environment generate work attitudes and affect-driven behaviors (Weiss & Cropanzano, 1996). Research indicated that leadership is very powerful environmental factor that elicit different attitudes and behaviors among employees (Cropanzano, Dasborough, & Weiss, 2017). It is argued that leaders’ paradoxical behaviors are taken as work environment that generate creative endeavors at individual and team levels. Leader paradoxical behaviors such as empowering team members by delegating decision-making authority are viewed positively, but controlling through rules and regulations creates confusion. Similarly, such leaders show intimacy and openness when

extra-role behaviors are required. Still, they maintain distance side by side, emphasizing rules and roles and focusing on organizational values. These paradoxical tensions generate confusion and trigger team members' attention to the information coming from the environment in a nonjudgmental manner. They concentrate on the position of the leader and what is required of them. Such paradoxical demands from the leader promote divergent thinking among team members, enhance cognitive focus by analyzing the information from different perspectives, give a clear vision of the goal, and lead to team creativity. To establish this relationship, our hypothesis flows as below:

H₆: PL is positively related to team creativity.

2.2.7 Paradoxical Leadership (PL) and Negative Affective Tone

A consistent positive and negative affective reactions are referred to as "affective climate" or "affective tone" (George, 1990). These dimensions (positive affective tone & negative affective tone) have different antecedents and impacts on employees' attitudes, behaviors, and performance outcomes (Tsai et al., 2012). Positive or negative affective tone, experienced at the individual level, diffuses to the whole team through emotional contagion and sense-making (Bartel & Saavedra, 2000).

Previous research has suggested team leadership, member attributes, relationships, and interactions between team members as antecedents of affective tone. Whereas consequences of affect include attitude towards the team, cooperation, conflict among team members, creativity, decision-making, and performance (Barsade & Knight, 2015). Past research has extensively studied emotions, moods, and affect at the individual level, but the impact of affect at the team level is sparse. Our understanding is still incomplete about the factors that can induce positive and or negative affect among team members.

Past research indicates that different leadership styles are positively related to PAT. Transformational leadership (Bruning, Turner, & Lin, 2020), charismatic leadership (Erez, Misangyi, Johnson, LePine, & Halverson, 2008), benevolent

leadership (Wu et al., 2019), and LMX relationships have all been found to be positively related to the PAT (Gooty, Thomas, Yammarino, Kim, & Medaugh, 2019). But in the case of NAT, we have limited knowledge (Barsade & Knight, 2015). This study is an endeavor to explore the impact of PL on NAT.

PL comprises dualities or paradoxical demands such as exploration and exploitation, flexibility and control, uniformity and individualization, etc. According to consistency theories, these competing demands create dissonance (Festinger, 1957) and discomfort, which tend to be aversive (Heider, 1958). In other words, these opposing demands tend to be attractive and repulsive, creating a discomforting experience. If the complex situation persists, this results in confusion, apprehension, and eventually loss of control. Individuals' responses to reduce this aversive situation may result in a negative affective reaction.

Literature has discussed intergroup and intragroup conflicts as the source of NAT (Greer & Dannals, 2017). Researchers argue that conflicts arouse personal connotations relating to skills, competence, or personalities and generate confusion, tension, and frustration (Zimmermann, McQuinn, & Macdonald, 2020). Following this line, It is argued that paradoxes from the leadership, such as controlling versus autonomy, emphasizing work requirements and flexibility, and maintaining distance and closeness simultaneously, create tensions, confusion, and frustration among team members and may lead to a negative affective response. Leaders, for example, show flexibility and invite team members to generate creative ideas. However, on the structural side, leaders emphasize rules and regulations to ensure task completion on time, exercise controlling functions, and take corrective actions when performance standards are not met. Such dualities are sometimes taken as personal connotations, generate confusion and frustration in team members, and become the source of NAT. Previous research noted that team norms and the display of rules are the sources of negative affective responses among employees (Kelly & Barsade, 2001).

Further, past researchers established that when team members attribute different processes, rules, and controlling aspects as threats, they show emotional reactions (Weiner, 1986). Paradoxical leaders exhibit opening behaviors that allow followers

to explore creative and innovative problem-solving solutions. They provide autonomy and encourage voice behavior to discuss and analyze various alternatives freely. But on the structural side, such leaders also maintain rules, synchronize personal and team norms and values with organizational norms, and maintain a distance to meet performance requirements. Sometimes team members do not understand the leaders' position, get confused, breed tensions, take these exploitative behaviors as threats to autonomy and demand complete free will to perform tasks. Moreover, AET explains that work environment lead to negative or positive affective reactions that generate affect-based attitudes and behaviors (Weiss & Cropanzano, 1996). It is argued that leaders show different paradoxical behaviors, such as providing support, autonomy, and resources to team members, and promoting divergent thinking, while maintaining strict roles, rules, and regulations as demanded by their positions. These paradoxes contribute to affective responses (such as team NAT) and may lead to several attitudinal and behavioral reactions. The literature and arguments cited above help predict the following relationship:

H₇: Paradoxical leadership is positively associated with a negative affective tone.

2.2.8 Negative Affective Tone (NAT) and Team Creativity

Literature predicts that positive and negative moods are related but distinct factors (Sy et al., 2005) with different implications on attitudes, cognitions, and behaviors (Tsai et al., 2012). It is widely determined that positive affect benefits creativity (Chi, Chung, & Tsai, 2011; Rhee, 2007; George & King, 2007). But in the negative affective tone-team creativity relationship, the literature is unclear (Barsade & Knight, 2015) and presents inconclusive findings. According to Spoor and Kelly (2004) and George and King (2007), shared negative moods alert team members to detect deficiencies and challenges with the situation encountered, enhancing team creativity.

While Rhee (2007) advocated the harmful impact of negative affective tone on team creativity because it inhibits social interaction and the morale of the team

members. This inconsistency in affect literature points out a deficiency in understanding and emphasizes the need for more investigations, which is reflected in a call from many researchers (Tsai et al., 2012; George & King, 2007).

Therefore, following the line of Rhee (2007), I argue that negative emotions narrow the cognitive horizon, deplete cognitive and physical resources (Hobfoll, 1989), exhaust energy, and negatively influence the interaction and morale of team members. These negative emotions influence information processing and decision-making and adversely affect team creativity. Moreover, the “threat-rigidity hypothesis” posits those team members who experience shared negative affective tone have narrow attentional scope and cognitions and exhibit ‘rigid response repertoires.’ The team’s negative affective tone prompts team members to focus on timely task completion. Interaction among the members is diverted from planning and critical evaluations to threatening situations or time pressures (e.g., deadlines). This situation propels them to ignore some pieces of information and divergent perspectives. They focus on the specific scenario but ignore the picture as a whole, which is harmful to creativity and innovation (Rhee, 2007).

Further, the negative affective tone may cause team members to distort rational thinking and oversimplify instrumental reasoning, leading to unfounded decisions and behaviors (Brief & Weiss, 2002). A negative affective tone is reflected in team members’ actual behaviors and creates a negative tone in job-related and personal tasks, resulting in poor personal and team performance. A negative affective tone in the team leads to poor communication and cooperation among members. Team members lose divergent views on any problem or situation, restricting new ideas and preventing analytical insights into current problems and situations.

Based on the above discussion, the following relationships are hypothesized:

H₈: Negative affective tone is negatively related to team creativity.

2.2.9 LMX Ambivalence and Team Creativity

LMX ambivalence is the experience of conflicting thoughts about the relationship with the supervisor. Literature generally suggests counterproductive outcomes

such as decline in performance (Lee, Thomas, Martin, & Guillaume, 2019), carrier commitment (Dechawatanapaisal, 2020), and subordinates' psychological safety and trust (Kim, 2022). These scholars support the argument from a conservation of resource perspective (Hobfoll, 1989) and claim that ambivalent situations impose conflict and stress on subordinates, which reduces their cognitive resources. A subordinate experiencing such a situation employs more resources to preserve and protect them. This loss of resources leads to counterproductive behaviors. While scholars on the other side suggested that ambivalence in a leader-follower relationship may yield mutually beneficial outcomes (Guarana & Hernandez, 2015), such individuals share ideas, cooperate in problem solving, and contribute to cognitive processing. Ingram and Zou (2008) propelled that individuals in such relationships promote trust, sympathy, and commitment. Zhao and Zhou (2021) suggested two perspectives related to the positive or negative outcomes of LMX ambivalence. The stressor perspective proposes LMX ambivalence as a threat to resources that leads to unfavorable outcomes. On the other hand, a paradoxical perspective observes LMX ambivalence as an opportunity to acquire new resources, thereby yielding beneficial outcomes. Taking the lead from a paradoxical perspective, it is argued that LMX ambivalence is a paradoxical situation for the subordinates working in teams. It broadens their cognitive flexibility and helps them show proactive behaviors. In such a condition, followers rationalize the leader's behavior as a result of an external situation and try to understand the leader's position and situational demands. LMX ambivalence, as a paradoxical situation, increases the environmental sensitivity of the followers working in teams and drives them to show extra-role behaviors such as creative behavior.

The above argument and literature help to suggest the following hypothesis:

H₉: LMX ambivalence is positively related to team Creativity.

2.2.10 LMX Ambivalence: A Mediator between PL and IWB

In summarizing the debate of hypotheses 2 and 3, it is argued that paradoxical demands from leaders are a source of tension, causing cognitive load and stress on

followers and leading to LMX ambivalence. This ambivalence increases sensitivity to the environment by expanding cognitive flexibility, and individuals in this state consider more alternatives and ideas to reach a balanced decision. In addition, AET suggests that environmental factors such as PL generate hassles in terms of LMX ambivalence that produce certain behaviors such as IWB in followers.

This discussion is summarized in the hypothesis below:

H₁₀: LMX ambivalence mediates the relationship between PL and IWB.

2.2.11 Negative Affective Tone (NAT): A Mediator between LMX Ambivalence and IWB

As discussed in the previous section, NAT results from ambivalence (e.g., [Van Harreveld et al., 2015, 2014](#)). This notion was supported by self-discrepancy theory ([Higgins, 1987](#)), in which an ambivalent individual feels an inconsistency between their actual and ideal attitudes, which leads to negative affectivity. It is also contended that this negative effect consumes energy and psychological resources while narrowing attentional focus, which prevents an individual from being logical and, as a result, hinders creativity. This notion is also supported by the argument that such individuals process biased information and adopt avoidant behavior that hinders their ability to invest in innovative processes.

AET proposes that emotions are generated by work hassles and lead to affective attitudes and behavioral outcomes ([Weiss & Cropanzano, 1996](#)). In line with this theory, it is argued that LMX ambivalence (work hassle) creates confusion and tensions and leads to negative affective responses in followers. NAT reduces the ability to consider different perspectives by narrowing the attentional span and inversely affecting IWB.

So, based on these arguments and theoretical support, our hypothesis goes as follows:

H₁₁: Negative affective tone mediates the relationship between LMX ambivalence and IWB.

2.2.12 Negative Affective Tone (NAT) a Mediator between Paradoxical Leadership and Team Creativity

Hypothesis 7 proposed the positive relationship of PL with NAT, and hypothesis 8 suggested the negative association of NAT with team creativity. The indirect link of “PL - Negative Affective Tone (NAT) - Team Creativity” is well explained by Affective Event Theory. Theory illuminates the relationship between work events, emotions, feelings, and work attitudes and behaviors. The theory suggests that affective attitudes and behaviors are explained by negative or positive moods evoked by work events (Weiss & Cropanzano, 1996). It is argued that competing demands from a leader (paradoxical leader), such as giving autonomy in decision-making for insightful solutions as well as controlling through rules and regulations, showing openness and flexibility for extra-role behaviors while emphasizing organizational norms, values, and adherence to rules, act as hassles (negative affect-inducing events). These paradoxical cues or work events create tension, confusion, frustration, and conflict among team members, leading to a negative affective response. A negative affective tone at the team level narrows the attentional span, prohibits rational information processing, and leads to divergent thinking, which decreases team creative behaviors. Based on the argument and AET, the following hypothesis is proposed:

H₁₂: Negative affective tone mediates between paradoxical leadership and team creativity relationships.

2.2.13 Negative Affective Tone Mediates between LMX Ambivalence and Team Creativity

By integrating the logic of hypotheses H4 and H8, which respectively posit a positive association between LMX ambivalence and negative affective tone and a negative connection between negative affect and team creativity, it is proposed that individuals experiencing ambivalence face a discord between their actual (ambivalent) attitude and their desired (univalent) attitude. This dissonance induces conflict and confusion, as it contravenes the fundamental consistency principle,

resulting in a negative emotional experience. Furthermore, this negative affective tone restricts the attentional scope of team members, diminishing their capacity for rational information processing and depleting cognitive resources. To compensate for this resource depletion, team members allocate additional resources, inadvertently losing perspective, thereby impeding their creative endeavors. This discourse gives rise to the following hypothesis:

H₁₃: Negative Affect mediates the relationship between LMX ambivalence and team creativity.

2.2.14 LMX Ambivalence Mediates between PL and Team Creativity

In the previous section, H2 of the study suggests a positive relationship between PL and LMX ambivalence. Similarly, H9 proposes a positive relationship between LMX ambivalence and team creativity. By integrating both hypotheses, it is argued that leadership is a vital environmental factor (Pengs et al., 2019) that has a strong influence on subordinates' behaviors and performance. External environmental complexity and the dire need for innovation push the leader to express paradoxical demands. A leader may require innovative and creative ideas from the team members, exercise flexibility, and give autonomy. But at the same time, the leader strictly adheres to rules and regulations to meet deadlines. Such paradoxical demands result in tension and confusion about the relationship with the leader. This conflicting situation leads to LMX ambivalence.

LMX ambivalence is a paradoxical situation experienced by the team members, which increases their sensitivity to the environment. Team members pay attention to the situation of the leader and understand the pressure that the leader is bearing at the moment. This enhances their cognitive breadth and flexibility. Team members capitalise on their cognitive and physical resources and develop and discuss creative ideas to meet the demands of the leader.

The above discussion and argument lead to the following hypothesis:

H₁₄: LMX ambivalence mediates the positive relationship between PL and team creativity.

2.2.15 Impact of PL on IWB via Sequential Mediation of LMX Ambivalence and Negative Affective Tone

Hypotheses H2, H4, and H5 provide the framework for serial mediation analysis. According to the model, LMXA and negative affective tone mediate the impact of PL on IWB. These hypotheses explain that PL exhibits paradoxical cues due to complex environmental demands, which create confusion, tension, and stress in followers. For instance, such leaders show controlling behaviors and enforce strict adherence to rules and regulations. On the other side, they give autonomy and flexibility to the followers to get out-of-the-box solutions (Zhang et al., 2015).

This complexity of leaders' behavior creates a perception of high- and low-quality relationships among the followers, called LMX ambivalence (Lee, Thomas, Geoff, et al., 2019). LMX ambivalence is a conflicting situation that creates tensions, violates the basic consistency principle (Festinger, 1957), and results in a negative affective experience. Negative affective tone is the main source of stress; it consumes energy and psychological resources, narrows attentional focus, and prevents a person from being logical, hindering creativity (Baumann & Kuhl, 2002).

Moreover, according to AET, leadership is a constant factor in organizational environment. PL, as an environmental factor, exhibits paradoxical cues that generates confusions and conflicting situation called LMX ambivalence. LMX ambivalence act as work events for followers working in teams, generate tension and lead to negative affective experiences. This negative affect, in turn, diminishes IWB.

Based on argument, literature, and AET theory, the study proposes the following hypothesis:

H₁₅: PL negatively influences IWB via sequential mediation of LMX ambivalence and negative affective tone.

2.2.16 Impact of PL on IWB via Sequential Mediation of LMX Ambivalence and Negative Affective Tone

Capitalizing on hypotheses H2, H4, and H6, this study proposes a serial mediation hypothesis to gauge the impact of PL on team creativity. PL, due to its paradoxical nature, drives team members of the software teams to perceive high and low quality relations with the leader simultaneously, hence having ambivalent cognitive experiences towards the leader called LMX ambivalence. LMX ambivalence is a conflicting situation that engenders tensions and negative affective experiences because the basic consistency principle is violated. Team members with negative affective states process biased information, see only one side of the picture, and adopt avoidant behavior rather than approach tendencies, discouraging positive investments in the creative process (Rietzschel, 2011). According to AET, PL as an environmental factor drives team members to cultivate positive and negative cognitions for the leader simultaneously, making this relation ambivalent (LMX ambivalent). LMX ambivalence acts as work events and results in negative emotional experiences, which in turn lower down team members' creative behaviors.

These arguments help to propose the following hypothesis:

H₁₆: PL negatively influences team creativity via sequential mediation of LMX ambivalence and negative affective tone.

2.2.17 Individual Level Mindfulness as a Moderator between LMX Ambivalence and Negative Affective Tone

According to Kabat (2005), mindfulness is “paying attention in a specific way: on purpose, in the present moment, and non-judgmentally” (p. 4). Mindfulness develops an impartial and curious attitude of analyzing situations with empathy and compassion (Gunaratana, 2011). Mindfulness is considered a disposition or trait as well as a state, but research indicates that some individuals are more mindful than others, which tags it as a disposition or trait (Baer & Lykins, 2011).

Past research consistently emphasizes the role of mindfulness as a predictor and regulator of negative emotions (Modinos et al., 2010; Farb et al., 2010).

In the study of affect, two paths are taken in literature. First, affect as an information model maintains that emotions sensitize individuals about the environment and the world, which helps to understand their position in the world (Roseman, 1984). Specifically, a negative affective tone invokes signals about the sensitivity of the situation by fully engaging and minutely processing information (J. M. George & Zhou, 2002). The second stream of research follows the conservation of resource perspective (Hobfoll, 1989) and consistency principle (Festinger, 1957). Proponents of this line maintain that a negative affective tone exhausts attentional focus and results in a narrowing of the span of reasoning. This suggests that LMX ambivalence violates the consistency principle, causing individuals to experience tension and conflict, which can lead to anxiety and fear.

On the other hand, the mindfulness definition highlights three aspects: first, present-focused consciousness; second, being attentive to internal and external emotions, thoughts, and events; thirdly, mindfulness involves receiving the information from stimuli with a free and accepting mind (Hyland et al., 2015). I posit that mindful individuals take this stressor (LMX ambivalence) with an open mind and are attentive to external and internal stimuli while keeping themselves separate from the problem, which helps them preserve their energies. By being attentive and aware of the current situation, mindful individuals objectively collect information from their environment with consciousness (Hülshager et al., 2014). Here, a negative affective tone becomes an environmental indicator. This situation helps mitigate the negative affective tone before it becomes severe. On the contrary, in the absence of mindfulness, LMX ambivalence (as a stressor) generates stress and tension. It depletes attentional resources, shortens perspectives, and overwhelms individuals with increased negative emotions.

So, following this line of reasoning, It is hypothesized that:

H₁₇ Individual level mindfulness moderates the relationship between LMX ambivalence and negative affective tone, making it weaker when mindfulness is high versus low.

2.2.18 Individual Level Mindfulness as a Moderator between Negative Affective Tone and IWB

Many researchers have previously used mindfulness as a moderator (see, for instance, [Levesque & Brown, 2007](#); [Bajaba et al., 2021](#)). When an individual experiences negative affect due to a stressor (LMX ambivalence), being mindful, the individual re-perceives the situation with an increased attentional quality of mind. Such a condition modifies the individual's reaction and, as a result, promotes innovative behavior ([Shapiro, Carlson, Astin, & Freedman, 2006](#); [Good et al., 2016](#)). After experiencing a negative affective tone, mindfulness activates the re-perceiving process. Individuals analyze the situation while remaining nonjudgmental and attentive, with a present focus that provides clarity and objectivity ([Baer, 2003](#)). This allows individuals to shift their perspective from being subjective to being objective ([Good et al., 2016](#)).

Mindfulness helps people separate themselves from negative affective states by disengaging from dysfunctional ruminative thoughts; hence, energetic resources get free for innovative endeavors ([Montani et al., 2018](#)). Now, these energetic resources are effectively used for innovative work. Mindfulness improves attentional quality and cognitive flexibility ([Glomb et al., 2011](#); [Good et al., 2016](#)), which helps to form new associations for developing and expanding knowledge from different domains and increases the likelihood of new ideas and solutions.

Moreover, mindfulness helps identify what is valued ([Deci & Ryan, 1985](#)). This helps people recognize and adopt values that are meaningful to their lives, which affect their behavioral choices in life and at work, especially in terms of innovative endeavors. So, in short, through attentional focus, mindfulness reduces the lifecycle of emotional reactions and their valence, which prevents them from reaching their peak, hence allowing us to gauge the environmental cues more objectively by investing energetic resources in fetching new alternatives. On the contrary, these negative emotions narrow the scope, exhaust energies, and leave an individual in chaos, adversely affecting IWB when they are low in mindfulness. These arguments and pieces of literature lead us to the following conclusions:

H₁₈: Individual level Mindfulness moderates the negative relationship between negative affective tone and IWB in such a way that this relationship is weaker when mindfulness is high than when it is low.

2.2.19 Team Level Mindfulness as a Moderator between PL and Negative Affective Tone

Traditionally, mindfulness has been discussed as an individual-level concept and is defined as “paying attention in a particular way: on purpose, at the present moment, and non-judgmentally” (Kabat, 2005, p. 4). Past research consistently emphasizes the role of mindfulness as a predictor and a regulator of emotions, more specifically, negative emotions (Modinos et al., 2010; Liu, Wang, et al., 2020). Individual and team-level mindfulness have different conceptualizations because team mindfulness can be interpreted as a collective cognitive process that originates from relationships and interactions among team members (Yu & Zellmer-Bruhn, 2018). According to Yu and Zellmer-Bruhn (2018), mindfulness is a “shared belief among team members that team interactions are characterized by awareness and attention at present events and by experiential nonjudgmental processing of within-team experiences.” Both individual and team-level concepts of mindfulness share two aspects, i.e., “present-focused attention” and “experiential processing,” but have different structures and compositions. Team-level mindfulness is considered a “quality of mind” mainly focused on interpersonal perspective (Vogus & Sutcliffe, 2012) and a collective cognitive process experienced during team members’ interactions. So, a collective mind emerged from team members’ interactions. Yu and colleagues found team-level mindfulness as a buffer between “task conflict and relationship conflict” and between “relationship conflict and social undermining” (Yu & Zellmer-Bruhn, 2018). Past studies suggest that emotions are offshoots of conflicts (Todorova, Bear, & Weingart, 2014; Yang & Mossholder, 2004), and mindfulness moderates the intensity of conflicts through present-focused attention and experiential learning. Following this line, it is argued that a leader’s paradoxical demands also create conflicting situations among team members, which lead to a negative affective response. Team-level mindfulness may enhance the present

focus of team members through experiential and nonjudgmental processing of information. Team mindfulness nudges to focus attention on recent experiences analyze disagreements and paradoxes objectively, communicate and discuss the situation with team members openly and impartially, and examine contradictory information from different aspects to get a vivid scenario of the situation (Liu, Wei, Xin, & Cheng, 2022; Good et al., 2016). Furthermore, mindful teams pay close attention to current issues and scan only the information relevant to the purpose rather than drifting to irrelevant issues. Present focus helps team members understand the leader's environmental demands and challenges and encourages them to frame and synchronize their roles consistent with the leader and situation. As a result, it does not allow paradoxes to develop negative affectivity, and if negative affective tones do come to the surface, they are neutralized with a positive rational approach.

Affective event theory postulates that individuals' emotional responses are the results of work events, and these emotions generate certain attitudinal or behavioral outcomes. The theory recognizes individual differences and suggests that dispositional characteristics of individuals may reduce or ameliorate emotional reactions (Weiss & Cropanzano, 1996). It is argued that paradoxical leaders' behaviors (work events) cause negative team affectivity (emotional response), which decreases team creativity (behavioral outcome). Team mindfulness is taken as a team's characteristic or disposition, which neutralizes the positive relationship between PL and negative affective tone in the team by smoothing the conflicts and tensions arising from the paradoxical behaviors of the leader through present attention and processing the information in a non-judgmental way. On the other hand, the mindfulness of team members also defuses negative affective tone by broadening attentional focus and processing every bit of information in an open and accepting manner.

These arguments and pieces of literature provide support for this hypothesis:

H₁₉: The positive relationship between paradoxical leadership and negative affective tone is moderated by team level mindfulness, such that when team level mindfulness is high (low), paradoxical leadership has a weaker (stronger) relationship with negative affective tone.

2.2.20 Team Level Mindfulness as a Moderator between Negative Affective Tone (NAT) and Team Level Creativity

Individual-level mindfulness has been used for emotional regulation in many studies. In contrast, team-level mindfulness is a relatively new concept, and we have limited information about its role as an emotional regulation agent. Team-level mindfulness considers interactions among team members based on two aspects: being attentive to the present situation and analyzing information nonjudgmentally (Yu & Zellmer-Bruhn, 2018). This study proposes team-level mindfulness as a moderator between NAT and team creativity. It is argued in a previous section that NAT narrows down team members cognitive horizons, depletes resources (Hobfoll, 1989), exhausts energy, and negatively influences team members interaction and morale. A negative affective tone influences decision-making and information processing and stifles creativity.

Mindfulness broadens team members' cognitive scope, allowing them to focus on current events and process information objectively. Team-level mindfulness offers a relaxed atmosphere that helps team members acquire new knowledge and skills, eliminate negative thoughts, and build strong relationships among themselves (Good et al., 2016). Team members communicate freely, consider contradictory information, and take multiple perspectives, which help to neutralize negative affective tone. Researchers identify mindfulness as a resource for the team (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001). The conservation of resource perspective describes that when attentional, cognitive, and physical resources deplete, team members deploy team-level mindfulness (as a powerful resource) to safeguard existing resources and acquire additional resources that mitigate the effects of NAT.

Moreover, mindfulness helps team members disengage from dysfunctional thoughts by sparing their energies from being exhausted and directing them to creativity. Research indicates that mindfulness enhances the attentional quality of team members by promoting cognitive flexibility (Good et al., 2016), which enables them to generate new alternatives and creative solutions to issues. Team-level mindfulness

also helps team members cushion negative emotions from escalating by focusing on the present and analyzing the situational demands of the leader more objectively. This sensitivity to the environment helps them come up with more creative alternatives.

Hence, the above discussion leads us to the following hypothesis:

H₂₀: The negative relationship between Negative affective tone and team creativity is moderated by team level mindfulness, such that when team level mindfulness is high (low), negative affect has a weaker (stronger) relationship with team creativity.

2.2.21 LMX Ambivalence and IWB: A Moderated Mediation Analysis

The arguments in hypotheses 3, 4, 5, 14, and 15 discuss the impact of LMXA (LMX ambivalence) on IWB via the mediating role of negative affect and the moderating effect of individual-level mindfulness. Moderation occurs on both paths, i.e., paths a and b. The hypothesis for indirect moderated mediated affect goes as below:

H₂₁: The indirect effect of LMX ambivalence on IWB via negative affective tone is moderated by individual-level mindfulness. This means that higher (lower) the individual level of mindfulness, lower (higher) the intensity of negative affective tone, and stronger (weaker) the positive relationship between LMX ambivalence and IWB.

2.2.22 Paradoxical Leadership and Team Creativity: A Moderated Mediation Analysis

Synthesizing the hypotheses 6, 7, 8, 16, and 17 that explain the impact of paradoxical leadership (PL) on team creativity (TC) via the mediating role of negative affect (NA). Team-level mindfulness moderates both relationships, such as the positive relationship between PL-NA and the negative relationship between NA-TC.

The hypothesis flows as follows:

H₂₂: The indirect effect of PL on team creativity via negative affective tone is moderated by team-level mindfulness. This means a higher (lower) the team-level mindfulness, a lower (higher) the intensity of negative affective tone, and stronger (weaker) the positive relationship between PL and team creativity.

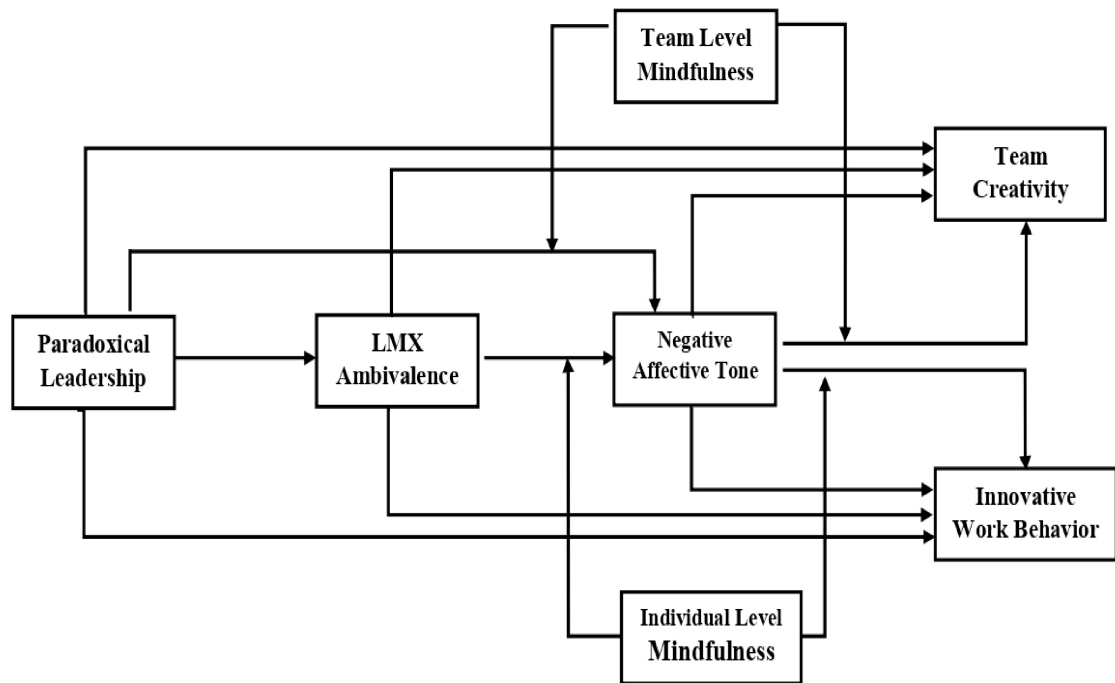


FIGURE 2.2: Theoretical Framework

TABLE 2.3: Hypothesis Statements

H1	Paradoxical leadership is positively related to IWB.
H2	Paradoxical leadership is positively related to LMX ambivalence.
H3	LMX ambivalence is positively associated with IWB.
H4	LMX ambivalence is positively related to negative affective tone.
H5	Negative affective tone is negatively related to IWB.
H6	Paradoxical leadership is positively related to team creativity.
H7	Paradoxical leadership is positively related to negative affective tone.
H8	Negative affective tone is negatively related to team creativity.
H9	LMX ambivalence is positively related to team creativity.
H10	LMX ambivalence mediates the relationship between paradoxical leadership and IWB.

Continued Table 2.3: Hypothesis Statements

H11	Negative affective tone mediates the relationship between LMX ambivalence and IWB.
H12	Negative affective tone mediates between paradoxical leadership and team creativity relationship.
H13	Negative Affect mediates the relationship between LMX ambivalence and team creativity.
H14	Mindfulness moderates the positive relationship between LMX ambivalence and negative affect in such a way that this relationship is weaker when mindfulness is high than when mindfulness is low.
H15	Individual-level mindfulness moderates the negative relationship between negative affective tone and IWB in such a way that this relationship is weaker when mindfulness is high than when it is low.
H16	Team level mindfulness moderates the positive relationship between paradoxical leadership and negative affective tone, such that when team level mindfulness is high (low), paradoxical leadership has a weaker (stronger) relationship with negative affective tone.
H17	Team level mindfulness moderates the negative relationship between negative affective tone and team creativity, such that when team level mindfulness is high (low), negative affect has a weaker (stronger) relationship with team creativity.
H18:	The indirect effect of LMXA on IWB via negative affective tone is moderated by individual-level mindfulness. This means that higher (lower) the individual level of mindfulness, lower (higher) the intensity of negative affective tone, and stronger (weaker) the positive relationship between LMX ambivalence and IWB.
H19:	The indirect effect of PL on team creativity via negative affective tone is moderated by team-level mindfulness. This means a higher (lower) the team-level mindfulness, a lower (higher) the intensity of negative affective tone, and stronger (weaker) the positive relationship between PL and team creativity.
H20:	PL negatively influences IWB via the serial mediation of LMX ambivalence and negative affective tone.
H21:	The indirect effect of LMX ambivalence on IWB via negative affective tone is moderated by individual-level mindfulness. This means that higher (lower) the individual level of mindfulness, lower (higher) the intensity of negative affective tone, and stronger (weaker) the positive relationship between LMX ambivalence and IWB.
H22:	The indirect effect of PL on team creativity via negative affective tone is moderated by team-level mindfulness. This means a higher (lower) the team-level mindfulness, a lower (higher) the intensity of negative affective tone, and stronger (weaker) the positive relationship between PL and team creativity.

Chapter 3

Research Methodology

This chapter exposes ‘research design’ for attaining the study objectives set by the researcher. Once variables and a theoretical framework are established, data collection becomes the next target. Hence, the chapter under discussion covers research design, type of study, ‘study setting,’ unit of analysis, ‘time horizon,’ population, ‘sampling,’ and measurements. In general, it encompasses all activities, from design to data collection.

3.1 Research Design

Research design is primarily aimed at measuring and collecting data on variables specified by the theoretical framework ([Creswell & Creswell, 2017](#)). Research design is based on research philosophy and research questions. This dissertation is founded on positivism, a philosophical approach based on the belief that there is an objective reality that can be observed and measured through empirical observations and scientific methods. This approach emphasizes quantitative data collection for any verifiable research question.

This approach is more appropriate for research questions that can be answered through the use of quantitative data and statistical analysis. The level of sophistication in design enhances the validity of the results. As each research problem is unique, it is therefore imperative that the research design be well structured to

follow the research problem. The objective of the dissertation is to enhance the existing body of knowledge, so it is referred to as basic research.

This multilevel study flows in two different streams, exploring individual-level and team-level perspectives. At the individual level, it is aimed at investigating the effect of paradoxical leadership (PL) on IWB through mediating mechanisms and boundary conditions. While, at the same time, it also unveils the impact of PL on team creativity through mediating and moderating processes. Moreover, a multilevel perspective at the team level provides a deeper understanding of the phenomenon.

3.1.1 Purpose of the Study

The purpose of the existing study is hypothesis testing. Different hypotheses were developed to investigate the impact of PL and LMX ambivalence on employees' IWB via mediating role of negative affective tone (NAT) and the moderating role of individual-level mindfulness. It also delves into the role of PL on team creativity via the mediation of a negative affective tone (NAT) and the moderating role of team-level mindfulness. Various statistical tools and techniques have been applied to test the hypothesis.

3.1.2 Type of Investigation

The current study investigated the correlation between PL and LMX ambivalence on IWB and team creativity through mediating and moderating mechanisms. The study accounted for multilevel perspectives by taking IWB at the individual level and team creativity at the group level.

3.1.3 The Extent of Researcher Interference

The study is correlational and conducted in a natural work environment. The role of the researcher was limited to distributing survey instruments to the software team members and their supervisors during their work hours in four-time

lags. Some past researchers have implied the same strategy for conducting similar studies (Naseer et al., 2020; Irshad & Bashir, 2020).

3.1.4 Study Setting

The study setting of the current research is non-contrived because it was conducted in a natural environment during the natural flow of work. In the natural environment, events occur in a usual way without any interference or intervention by the researchers. On the other hand, in a contrived environment, the researchers strictly control events. Data collected in a non-contrived setting is more accurate because it captures real-life, natural behaviors. The results of such data collected in the natural environment have better external validity (Dipboye & Flanagan, 1979). Survey questionnaires were distributed, filled out, and collected during regular work hours.

3.1.5 Research Strategy

Data were collected from software team members and their supervisors using a survey questionnaire strategy. For this purpose, survey questionnaires were distributed at different time lags to collect the data for all variables. The questionnaires for different time lags were structured by adopting and adapting well-established instruments for all the variables used in the study. Different statistical tools and analyses proved the reliability and validity of these scales.

3.1.6 Unit of Analysis

In any research, the unit of analysis is the entity for which or for whom facts are collected. In other words, it is the object of the study in a research project. In social sciences, the unit of analysis typically could be individuals, dyads with supervisors, peers, groups, organizations, countries, and continents. In the current investigation, data were collected from software houses in Pakistan at two levels. At the individual level, responses were captured from software team members. At the second level, individual members were nested within groups or teams under

supervisors to whom they were reporting; hence, multilevel modeling was used to analyze the data.

3.2 Time Horizon and Data Collection Process

The design the study is cross sectional by nature but the data were collected at different time lags to minimize the risk of common method bias. Data have been collected from more than thirty software houses in Pakistan. Three major cities, including Islamabad, Rawalpindi, and Lahore, were considered for data collection due to the greater concentration of software houses. Data were collected in four-time lags over four months, but generally, it took six months to finalize and match the responses. Data collection started in May 2021, and the whole process ended approximately in the middle of November 2021. In the first phase, survey forms were circulated to subordinates to gauge their responses for PL and team-level mindfulness. Responses for demographics were also captured at time 1. After the lapse of fifteen days (Reis & Wheeler, 1991), the second wave of data collection was initiated. In the second time lag, LMX ambivalence and individual-level mindfulness data were collected from the same subordinates. Data collection for the third time lag was initiated after two weeks of the second wave. During this stage, positive and negative affective tone were noted from the same subordinates. Finally, the fourth wave started after a two-week gap from the previous data collection stream. In this stage, responses for IWB from each team member and team creativity for the whole team were captured by supervisors using two different survey forms. Moreover, data for negative affective tone were later aggregated for PL and team affective climate, which is in line with the previous research (Ishaq et al., 2021; Huang et al., 2022). Finally, it took four weeks to finalize, match responses, and organize clusters coded initially at first-time lag.

In this study, several self-reporting scales have been used, so there was a risk of common method bias that might pop into the process and pollute the study results. Two techniques were employed to minimize the risk of common method bias: first, data were collected from dyads, which refers to collecting data from both subordinates and supervisors, and second, data were collected with four-time lags.

Further, respondents were assured that their confidentiality would be maintained and the study results would only be used for academic endeavors. Finally, at every stage, the researcher administered the data collection process with the help of a paid assistant. Details of the timeline of data collection for all variables are given in **Table 3.1**.

TABLE 3.1: Time Lagged Survey

“Variables”	Time Lag	“Survey Reporting”
Paradoxical Leadership	T1	Self-reported
Team-Level Mindfulness	T1	Self-reported
LMX Ambivalence	T2	Self-reported
Individual-level mindfulness	T2	Self-reported
Positive Affect Negative Affect	T3	Self-reported
IWB	T4	Supervisor reported
Team Creativity	T4	Supervisor reported

3.3 Population and Sampling

Population, according to [Sekaran \(2003\)](#), is “the entire group of people, events, or things of interest that the researcher wishes to investigate” (p. 265). The scope of the study is to investigate innovation and creativity at individual and team levels in the Pakistani software industry. Innovation and creativity are the hot spots for every organization to be successful. Still, their need in the software industry is more significant, where the shelf life of any software is not more than a day. Pakistan’s IT industry has become a fast-flourishing industry in the last decade. According to Pakistan Software Export Board (PSEB), annual IT exports in 2012-2013 were \$0.8 billion, which abruptly sprang up to almost \$3.0 billion in 2022 (precisely \$2.6 billion), showing a surprising growth rate of 81% ([PSEB, 2022](#)).

As per PSEB, more than 600,000 IT professionals work in more than 17,000 SECP-registered IT companies. This population is rapidly growing as 231 recognized universities produce more than 25000 IT graduates annually (PSEB, 2022). However, this industry is not free from challenges; for instance, meeting deadlines and providing innovative solutions made the job very stressful and demanding (Shafi et al., 2020). These contrasting recognitions drew the attention of practitioners and researchers toward new avenues of inquiry. For instance, multiple researchers have studied innovation and creativity in software employees (e.g., Shahzad, Xiu, & Shahbaz, 2017; Shafi et al., 2020; Tanveer & Hassan, 2020; Malik, Awan, & Nisar, 2020).

As the nature of the study is multilevel, teams from different organizations have been selected randomly. The selection decision was based on the availability of most team members and their respective supervisors from each organization.

3.3.1 Sampling Technique

In the current dissertation, a convenient sampling method has been employed. It is a non-probability sampling technique used to select respondents based on their ease of access or availability. This technique is more convenient, appropriate, and economical. Nonprobability sampling is the technique where the probability of selecting a unit as a candidate for the sample is unknown. Convenient sampling is used to get responses timely and within the boundaries of budget (Rahi, 2017). Data collection in developing countries like Pakistan is tedious due to the non-availability of funds and time constraints. Personal and professional contacts are used to collect social science data (e.g., Majeed & Fatima, 2020; Sarwar & Muhammad, 2020; Javed et al., 2017). Moreover, researchers have to bear all the operational costs during the whole process, which is why this technique was deployed. Data were collected from the software houses of three major cities in Pakistan, i.e., Islamabad, Rawalpindi, and Lahore because the availability and accessibility of respondents from the targeted population was easy by deploying a convenient sampling technique. Data were collected from software team members and their respective supervisors who were nested together for analysis. Hence

541 subordinates who were nested in 103 teams responded on PL, LMX ambivalence, negative affect, individual and team level mindfulness whereas supervisors reported IWB for every single subordinate in the group and team creativity for their respective teams.

3.3.2 Sampling Procedure

Data collection was initiated by administering survey questionnaires to the research sample of software team members from Islamabad, Rawalpindi, and Lahore. Before this process, the researchers obtained approvals from the Institutional Review Board of the university and the Pakistan Software Export Board (PSEB) to collect data from these IT companies. Later, these approvals were submitted to the HR departments of the software houses, and with their consent the list of employees were obtained. Unique codes were assigned to hide the identities of the software team members with the help of their supervisors and team leaders. Lists of employees along with their unique codes were kept confidential by the researcher. For this process, assistants were hired who were also MS scholars at different universities and were well aware of the whole process. Allocated codes were mentioned on survey forms and were distributed and collected by the researchers and assistants from software team members entirely by themselves. Respondents were concerned about confidentiality and data usage. They were assured that the data would be utilized only for study purposes. Supervisors were also provided with coded survey forms to collect responses about individual team members' innovative behavior and teams' creative performance. Later on, these questionnaires were matched with the help of codes assigned earlier.

To minimize the "common method bias risk," the data were collected from two sources, i.e., employees and supervisors, with four-time lags. Data on Forms 1, 2, and 3 were collected at three different times from members of different software teams, while Forms 4 and 5 were used to gauge responses from supervisors. In Time 1, a total of 900 survey forms (Form 1) were distributed to members of different teams to tap responses on demographics, paradoxical leadership, and team-level mindfulness. A total of 784 forms were returned, with the usable number being

774 out of 900, yielding a response rate of 73%. After 15 days, in the second wave, 768 forms (Form 2) and the codes were distributed to the same employees, who filled the data form for LMX ambivalence and individual-level mindfulness.

In this segment, 662 usable responses were received out of 768 forms. In the third time lag, after two weeks of the previous data collection stage, 655 forms (Form 3) along with the codes were distributed to gauge responses for Positive Affect, Negative Affect (PANA), and out of those, 575 usable responses were returned. Finally, at time 4, Form 4 (for the IWB) and Form 5 (for team creativity) were circulated to the supervisors. Some of the supervisors declined to respond for specific teams and team members, thereby dropping out 34 responses, and we received 541 usable forms with 103 supervisors for final data analysis. Hence, the final response rate remained at 60%.

3.3.3 Demography of the Sample

Table 3.2 provides details regarding the demography of the sample. There were 541 useful respondents, with 85% males and 15% females. Because of the culture of male dominance, it is understandable that the Pakistani workforce, particularly in software houses, is predominantly male. Respondents aged 18 to 30 years were 47.6%, those aged 31 to 40 years were 48.8%, and those aged 41 to 46 years and above were 3.7%, indicating that most respondents were between the ages of 18 and 40. Furthermore, 52.9% of respondents had bachelor's degrees, and 45.7% had master's degrees because most people join software houses after completing a bachelor's degree.

Employees with less than 5 years of general experience accounted for 44.7%; those with 6-10 years of experience accounted for 39.3%; and those with 11 years of experience or more accounted for 26%. Mostly, employees were falling below 10 years of general experience because IT in Pakistan is flourishing now and mostly youth are joining this industry. Furthermore, 66.7% of employees had up to three years of departmental experience. Similarly, the concentration of employees working under their current supervisor was also high in the category below 4 years, at 75.2%.

TABLE 3.2: Demographics

Demographics	Frequency	Percentage
Gender		
Male	460	85
Female	81	15
Age		
18-25yrs	69	12.8
26-30yrs	188	34.8
31-35yrs	200	37
36-40yrs	64	11.8
41-45yrs	17	3.1
46 and above	3	0.6
Education		
Intermediate	7	1.3
Bachelors	286	52.9
Masters	247	45.7
PhD	1	0.2
General Experience		
'Less than 5 Years'	242	44.7
6-10 Years	164	30.3
11-15 Years	105	19.4
More than 15 Years	30	5.5
Department Experience		
Less than 1 Year	151	27.9
1-2 Years	113	20.9
2-3 Years	102	18.9
3-4 Years	44	8.1
More than 4 Years	131	24.2
Experience with Supervisor		
Less than 1 Year	220	40.7
1-2 Years	96	17.7
2-3 Years	91	16.8
3-4 Years	48	8.9
More than 4 Years	86	15.9

3.4 Sample Size Calculation

For sample accuracy, G*Power (version 3.1.9.4) was employed use in this study (Faul, Erdfelder, Buchner, & Lang, 2009). G*Power is used to calculate t-tests, f-tests, chai square tests, and effect sizes in behavioral research methods (Faul et al., 2009). Many esteemed scholars have used this tool to test sample accuracy (see, for instance, Irshad & Bashir, 2020; Majeed, Irshad, Fatima, Khan, & Hassan, 2020). Priority power analysis was used in the first step. Following Faul et al.

(2009) and Memon et al. (2020), the maximum number of arrows pointing to any dependent variable is given (typed) to the option “Number of predictors.” In this study, the maximum number of arrows was 5 to IWB, so this number (5) was given to the “Number of predictors” option. From the ‘test family’ option, “F test,” and “statistical tests,” “linear multiple regression: fixed model R2 deviation from zero” options were selected. In other cases, default values were used. A priori sample size of 138 was established through results which was far less than the sample size used in the study (541). For more assurance, post hoc power analysis indicated 0.99, much higher than the threshold value of 0.88 recommended by (Cohen, 2013). For further satisfaction, post hoc power analysis was calculated in sample size 541 with the parameters set in the previous section. A value of 0.99 indicated the adequacy of the sample size for testing the hypothesis because this value is higher than the threshold of 0.80 (Cohen, 2013).

Secondly, the adequacy of sample size was further confirmed by suggestions and a table of sample size calculations provided by Krejcie and Morgan (1970). The table confirmed that the sample size of 541 was large enough to represent 1000000 or more people. In our case, the maximum number of employees in software houses is 600,000; therefore, a sample size of 541 was quite above the recommended threshold. Thirdly, an acceptable sample size can be calculated by a thumb rule of 5:1, as suggested by Hair, Black, Babin, Anderson, and Tatham (2010), which clarifies that for every single observation or item, there should be 5 respondents. A total of 88 items are present in the survey, with an estimated sample size of 440 (88 x 5), but 900 survey forms were distributed initially. After the 4th data collection wave, finalized responses counted 541 matching with 103 supervisors or team leaders, which is well above the threshold of 440.

In multilevel analysis, sample size based on the number of individual respondents becomes less valuable than the number of groups or clusters (in groups or teams, subordinates are clustered within supervisors). According to the suggestions of Maas and Hox (2005), at least 100 groups are necessary to calculate variance and other statistics accurately. The extent study deals with the data of 541 subordinates (Level 1) clustered against 103 supervisors (Level 2), which fulfills the sample size requirements suggested by Mass and colleagues.

3.5 Instruments

Instruments are the data collection tools used to grab the respondents' responses. Instruments applied in the current study are adopted questionnaires to capture responses on different variables. To test the hypothesis, data were obtained from software team members and their supervisors. In each software house, multiple teams under respective team leaders work on different projects. Every team was taken as a group, and the team members reported to the team leader or supervisor. Responses from the team members and their respective supervisors were collected on a five-point Likert scale. It is also referred to as a "psychometric response scale" that notes respondents' level of agreement with a statement at five points ranging from "strongly disagree" to "strongly agree." Moreover, the present study's dependent variables (IWB and team creativity) were rated by the employees' supervisors.

3.5.1 Paradoxical leadership

PL was measured using a 5-point Likert scale with a range of "1 = strongly disagree to 5 = strongly agree," developed by (Zhang et al., 2015). The scale comprises 22 items that measure PL subjectively. Respondents are asked to identify the extent to which they have had paradoxical cognitions concerning their leader-follower relationships. Sample items of the scale include "Uses a fair approach to treat all subordinates uniformly, but also treats them as individuals," "Maintains overall control, but gives subordinates appropriate autonomy," and "Keeps distance from subordinates, but does not remain distant."

3.5.2 LMX Ambivalence

Lee and colleagues' seven-item scale has been employed to gauge responses for LMX ambivalence on a 5-point Likert-type scale (Lee, Thomas, Martin, & Guillaume, 2019). The scale captures responses from "1 = strongly disagree to 5 = strongly agree." Sample items include: "I have conflicting thoughts: sometimes I

think that my working relationship with my manager is very good, while at other times I don't," and "I have conflicting thoughts: sometimes I think my manager recognizes my potential, while at other times I don't."

3.5.3 Negative Affective Tone (NAT)

The "Positive Affect and Negative Affect Schedule" (PANA) has been used to NAT at the individual level. [Watson et al. \(1988\)](#) developed a 20-item PANA scale. The scale ranges from "very slightly" to "extremely." The scale comprises 10 items for PAT, e.g., "interested, excited, enthusiastic," etc., and 10 for NAT, e.g., "distressed, scared, hostile," etc.

3.5.4 Individual-Level Mindfulness

[K. W. Brown and Ryan \(2003\)](#) "Mindful Attention and Awareness Scale (MAAS)" has been used to capture individual-level mindfulness responses. Almost 12 scales have been developed for this construct, but MAAS measures various contexts, including organizations ([Montani et al., 2018](#); [Dane, 2010](#)). Participants were asked to rate statements ranging from 1 (almost always) to 5 (almost never). The original scale includes 15 items, but not all are pertinent to organizational settings. So, on the recommendations of Montani and colleagues, this study excluded three items due to being less relevant to the organizational context ([Montani et al., 2018](#)). These items include: (1) "I break or spill things because of carelessness, not paying attention, or thinking of something else," (2)- "I snack without being aware that I'm eating and" and (3)- "I drive places on automatic pilot and then wonder why I went there."

3.5.5 Innovative Work Behavior (IWB)

This study implies a six-item scale to measure IWB. The scale was developed by [Scott and Bruce \(1994\)](#) and has been used by many other scholars who have reported good reliability (see [Zhu, Yao, & Zhang, 2019](#); [Zhang & Su, 2020](#)). Responses were rated on a 5-point Likert scale ranging from "1-strongly disagree to

5-strongly agree.” Sample items include “Searches out new technologies, processes, techniques, and/or product ideas and “Develops adequate plans and schedules for the implementation of new ideas.”

3.5.6 Team-Level Mindfulness

Yu and Zellmer-Bruhn (2018) 10 items team-level mindfulness scale has been recently developed to capture responses from team members at 5 point likert scale ranging from “1 = strongly disagree to 5 = strongly agree.” Sample items include “It is difficult for the team to stay focused on what is happening in the present,” and “This team is friendly to members when things go wrong.”

3.5.7 Team Creativity

Shin and Zhou (2007) four-item scale has been deployed to measure team creativity by asking supervisors to rate statements like “How well does your team produce new ideas?” For this purpose, a range from “1= poor to 5 = excellent” was used to grab the responses.

3.6 Control Variables and Other Variables

Control variables in this study include gender, age, education, general experience, years in this department, and years with the current supervisor. Moreover, PAT was also controlled to get the precise effect of negative affective tone as a mediator between LMX ambivalence and IWB. The control variables were decided based on previous research (Javed, Fatima, Khan, & Bashir, 2021; Ishaq et al., 2021). In the current dissertation, Education is gauged on a scale ranging from intermediate to doctorate. Gender was measured as a dummy variable coded 1 = for male and 2 = for female. Age was measured between “18-25 years to more than 46”; similarly, other demographics like No. of Years Working in this Department and No. of years Working under Current Supervisors were measured on scales ranging from Less than 1 years to more than 4 years.

3.7 Data Analysis Procedure

In this study, I employed SPSS, and Mplus to conduct data screening, multivariate normality, outliers, linearity, convergence validity concerns, CFA, absolute fit index (such as chi-square, RMSEA), incremental fit index (for instance, CFI and TLI), AVE validity and CR, reliability analysis, correlation analysis, and collinearity and multilevel analysis for direct, indirect, and conditional effects.

3.7.1 Data Screening

Data screening is mainly concerned with checking the accuracy of data (Kline, 2005; Hair, Black, Babin, Anderson, & Tatham, 2006). It deals with identifying unusual patterns (e.g., outliers), handling missing information, determining whether the data set meets normality assumptions, etc. For this purpose, graphic representations and descriptive statistics, play an essential role in initial screening (Tabachnick & Fidell, 1996). Screening for missing values is a good starting point in the data screening. Missing values can pollute the results of the study if their presence is 10% or more and requires special attention (Cohen, Cohen, West, & Aiken, 1983). In the current dissertation, no specific pattern of missing values was spotted, and their presence was well below the acceptable range ($\leq 10\%$). During the screening process, 11 cases sprung up and were treated with a mean approach. Hence, the final sample size was 541 subordinates under 103 supervisors.

3.7.2 Multivariate Normality

Normality is the even distribution of scores in the middle of the range with smaller exemptions. When the distribution of scores is hooked up with multiple variables, it is termed multivariate normality. As structural equation modeling is being employed in this study, multivariate normality must be met before deep-dive analysis. In this regard, two hallmark tests, skewness, and kurtosis, help to determine whether data is usually distributed and fit for more regressive tests (Bollen, 1989). Skewness explains the symmetry or lack of symmetry in data. The visual manifestation of skewness can be seen in terms of tails on both the left and right sides

of the graph. If the tail is longer on the right side, the data is positively skewed, indicating that most scores are below the mean value. On the other hand, the long tail on the left represents negatively skewed data, which means that most scores are above the mean. Normally distributed data has an equal tail on both sides, and the skewness value remains zero (Thompson, 2004). Kurtosis, another milestone in data normalization analysis, represents the peakedness of the data frequency distribution curve (Thompson, 2004). A high positive value in kurtosis means a higher curve with fat tails on both sides, and negative kurtosis values indicate a lower peak with thin tails (Tabachnick & Fidell, 1996). Normally distributed data having a kurtosis value of 3 show an average peak in the curve. But if the kurtosis value is greater than 3 (> 3), it is reflected with a high peak and heavier tails, while the kurtosis value less than 3 (< 3) shows a smaller peak and lighter tails. The normality tests of the current study reflected values for skewness and kurtosis well within range, and hence no skewness or kurtosis was observed. The data were normally distributed, and the skewness values were well within range.

3.7.3 Outliers

Outliers are extreme values of observable variables that differ from the rest in a data set and can pollute study results because they violate the normality assumptions (Barnett & Lewis, 1984). Multivariate outliers are extreme values over more than two variables. Cook's distance, DFFit, and DFBeta are valuable statistical tools for evaluating the influence of outliers in regression analysis. These metrics serve distinct purposes, for instance, Cook's Distance quantifies the overall impact of an individual data point on the model. When Cook's distance is less than 1, it suggests that no single case has a substantial influence on the model's parameters. DFFit measures the change in predicted values when a specific case is included or excluded from the model. If DFFit is minimal, it implies that the model's predictions remain stable when this case is considered or removed. DFBeta assesses how sensitive a regression coefficient is to the inclusion or exclusion of a particular data point. A DFBeta value below 1 indicates that the presence or absence of a case has a limited impact on the regression coefficients.

3.7.4 Linearity

Linearity is the linear association between residuals of predictor variables (Field, 2013). When model has more than one predictor variables, their combined impact is best understood by summing their individual effects. In this study, curve estimation function of SPSS was employed to test linearity assumption. Linear, cubic and quadratic models were calculated and linear models provided best statistics.

3.7.5 Reliability Analysis

Reliability is the consistency of the scale, which means that the items on the scale are consistent with one another. Reliability is expressed in terms of the inter-item correlation of an instrument. The high reliability of a scale shows that respondents are consistent on all items and that these items belong to the same scale. In contrast, low reliability expresses inconsistency of items, i.e., respondents consider the item different from the construct. “Cronbach’s alpha” is used to determine the reliability of an instrument. Its value must be greater than 0.70 (Kline, 2005). Data from the current study displayed good reliability for all instruments.

3.7.6 Correlation Analysis and Collinearity

Correlation indicates the linear relationship between two variables and is represented by the correlation coefficient r . the value of the coefficient must lie within -1 to +1. In a model, the -1 value specifies that both variables have a strong inverse relationship, and +1 denotes a robust direct relationship, whereas the 0 value of r predicts no relationship (Gogtay & Thatte, 2017). This relationship is required between predictor and criterion variables for regression analysis. Conversely, Collinearity expresses a strong relationship between two predictor variables that can pollute the results of the regression coefficient. Multicollinearity represents the existence of a strong relationship between more than two predictor variables ($r > 0.90$) (Bollen, 1989; Kline, 2005) and if the problem exists in a model. One or more predictors have to be dropped.

Squared Multiple Correlation (SMC) is a good tool to check the multicollinearity between the variables and is represented by R^2 . A greater value of SMC ($R^2 > 0.90$) indicates the presence of multicollinearity or singularity (Kline, 2005). Tolerance statistics is yet another important tool to dig out multicollinearity. Its value ranges from 0 to 1, and according to Kline (2005), multicollinearity exists if the tolerance value is less than 0.1.

In the current study, values in the correlation matrix do not indicate any concern for multicollinearity. All SMC values are within acceptable limits, i.e., less than 0.90. The tolerance level statistics are also within the limit (i.e., less than 0.1). Hence, correlation, SMC, and tolerance level statistics do not express any problem of multicollinearity.

3.7.7 Structural Equation Modeling

In the current dissertation, “Structural Equation Modelling (SEM)” is employed to analyze the structural relationships of the theoretical model. In SEM, structural relationships are analyzed using the multivariate statistical technique studied by (Diamantopoulos, Sigauw, & Cadogan, 2000). SEM provides an excellent opportunity for two significant analyses. First, confirmatory factor analysis (CFA) helps to confirm the factors of a variable and the relationship between observed variables and latent constructs. Secondly, SEM is very useful in multiple regression analysis because it allows researchers to simultaneously regress multiple predictors with a single dependent variable. The analysis through SEM is more rigorous and can confirm whether the data support the hypothesized model or not. Five logical steps are involved in SEM, i.e., model specification, identification, parameter estimation, model evaluation, and model modification (Hoyle, 2011; Kline, 2010).

First, the model is specified in terms of exogenous and endogenous variables. An exogenous variable, or independent variable, is a predictor variable that causes a change in another variable. Endogenous variables are those that are changed by one or more exogenous variables and may be a mediator or dependent variable. In the current study, multiple exogenous and endogenous variables have been used

for analysis. As the second step of model identification, the CFA and path models were assessed (Bollen, 1989).

For instance, Kline (2005) recommended four indices that are quite helpful for a model fitness assessment. These include the relative “Chi-Square CMIN/DF,” which determines whether a sample of data came from a population with the same distribution and, if in the current model, any path is dropped, to what extent model fitness would be compromised (Byrne, 2001). Similarly, the “Comparative Fit Index (CFI)” compares the absolute fit between the target model and the null model. The “Root Mean Square Error of Approximation (RMSEA)” is a parsimony-adjusted index that assesses the size of the residual correlations or lack of fit compared to the saturated model (Kline, 2005; Tucker & Lewis, 1973). Here are the cut-off values for the said indices used in this study to measure the ‘model’s goodness of fit.’ According to Bollen (1989) and Kline (2005), the hypothesized model is acceptable if the relative chi-square value is less than 3 (< 3) and the p-value for the same is more than 0.05 ($p > 0.05$); moreover, the values for CFI and IFI of the hypothesized model should be greater than threshold value 0.90. Likewise, if the RMSEA value is less than 0.05, it is considered good for model fitness; however, 0.08 or less is considered fair enough for data to step in for regression analysis (K. W. Brown & Ryan, 2003). When the model’s goodness of fit was established through the different parameters described earlier, multilevel analysis was performed. The proposed hypotheses were tested using a structural model through multilevel analysis. The two-tailed method was applied for the decision to accept or reject any hypothesis. For this, a p-value less than 0.05 ($p < 0.05$) has been considered a threshold in regression analysis.

3.8 Analytical Techniques

3.8.1 Research Question Driving Multilevel Analysis

The research question has a clear linkage to the research methodology. Research questions derive the whole analysis procedure (Aguinis, Gottfredson, & Culpeper, 2013). If the research question involves different levels of respondents, it is

addressed through multilevel analysis. Individual-level variables are considered at level 1, group-level variables are treated at level 2, larger groups at level 3, and so forth. Level 1 is nested in level 2, and level 2 data is nested in level 3, etc. This study is based on two levels: software team members and their team leaders or supervisors. In this study, variables reported by software team members are at level 1, while variables about individual members or the whole team reported by their supervisors are at level 2. Team members are clustered against their team leaders or supervisors to whom they are reporting.

3.8.2 Decision for Multilevel Analysis

Such variables are called single-level by nature but multilevel by design. In this study, data for paradoxical leadership, LMX ambivalence, negative affective tone, individual level mindfulness, team level mindfulness and innovative work behaviors were captured at individual level from employees of the software teams. On the other hand, some variables are group-level variables, so the same data are collected for the whole group. For instance, in the current study, the data on team creativity were collected from the supervisors for their respective teams, and the same scores were placed against every team member in the same team. As team creativity is multilevel by design i.e., same data was used for each group making one to many relationship so there was no need to aggregate any other variable. Team creativity data was used for making clusters in Mplus and all other variables were tested against these clusters (Muthén & Muthén, 2010).

If variables are single-level by design but multilevel by nature, it is important to calculate intraclass correlations such as ICC, ICC(1), ICC(2) and inter-rater reliability $rwg(j)$. The ICC explains how closely the candidates in a group resemble each other. High scores on the ICC represent a higher level of cohesiveness within a group (lower level of variability) and a greater variance between the groups (Heck & Thomas, 2020). The cutoff point for ICC values is between 0 and 1. Greater value within the range provides justification for multilevel analysis. ICC (1) is used when only one rater is involved and there is no agreement needed to test inter-rater reliability. Conversely, ICC (2) tests are employed for more than

one raters to assess inter-rater reliability, whereas $rwg(j)$ suggests within-group agreement. The cutoff values for ICC (1), ICC (2) and $rwg(j)$ are 0.25, 0.7 and 0.7 respectively (LeBreton & Senter, 2008). Greater values on each parameter nudge researchers towards cross-level analysis. Statistics showed higher values for all level 1 variables which gave motivation to run the cross-level tests. Therefore, the model composition was 2-2-2-2, and 'between the levels' variances were included in the analysis.

Chapter 4

Results

Chapter 4 includes data analysis and the results of the study. In this chapter, the consequences of paradoxical leadership and LMX ambivalence have been analyzed at the cross-level. Data was collected and finalized from 541 respondents nested in 103 teams working under different team leaders. The SPSS and Mplus software packages were used to test the data's reliability and validity. Finally, structural model regression analysis was conducted to test the hypotheses.

4.1 Data Screening

As a first step, coded questionnaires were adequately examined and matched with their respective respondents for error-free data tabulation. As mentioned in the previous section, missing values were treated using the mean approach. This section deals with outliers, linearity, normality, multi-collinearity and independence of observations analysis. SPSS and Mplus softwares were used to test the assumptions.

4.1.1 Outliers

Outliers are the extreme values that are substantially different from the general trend of the main data set (Field, 2013). Outliers are treated only if they have a significant impact on the parameters of the model (Stevens, 2012). The influence

of the outliers can be tested using a variety of tests, such as Cook's distance, DFFit, and DFBeta (Field, 2013). Cook's distance measures the overall impact of a case on the model, whereas DFFit measures the difference in predicted value of a case when the model is estimated after including and excluding that case. DFBeta, on the other hand, explains the sensitivity of the regression coefficient to including or excluding a case. Less than 1 value of Cook's distance, when the DFFit is also minimal and the DFBeta is below 1, is a proof that outliers have negligible influence on the model's parameters (Weisberg & Cook, 1982; Field, 2013). For thesis data, these statistics were generated by regressing IWB and team creativity (dependent variables) on paradoxical leadership, negative affective tone, and LMX ambivalence (independent variables). **Table 4.1** clearly indicates that Cook's distance, DFFit, and DFBetas have values are smaller than 1, which shows that outliers have no significant impact on the model.

TABLE 4.1: Outliers Influence Evaluations

Influence Statistics for IWB	Statis- wise Value	Observation Max	Influence Statistics for TC	Observation wise Max Value
Cook's distance	0.081		Cook's distance	0.027
DFFit	0.033		DFFit	0.026
DFBeta Intercept	0.034		DFBeta Intercept	0.055
DFBeta PL	0.029		DFBeta PL	0.009
DFBeta LMXA	0.01		DFBeta NA	0.005
DFBeta NA	0.016			

$n_j = 103$, $n_i = 541$, IWB = Innovative Work Behavior

4.1.2 Linearity

Linearity refers to the expectation that residuals on outcome variables show a linear relationship with those of predictor variables (Field, 2013). In the case of more than one predictor, their combined effect is best explained by adding their effects together. Linearity was tested by comparing each variable with every other

variable of the model using the curve estimation function in the regression menu of SPSS. Linear, quadratic, and cubic models were compared. **Table 4.2** indicates that the linear model gives best-fit statistics.

4.1.3 Normality

It is the symmetrical distribution of data around the mean (Field, 2013). Normality may be univariate or multivariate. Univariate normality deals with a variable, whereas multivariate normality is concerned with the normal distribution of data for multiple variables. Generally, skewness and kurtosis are the statistics used to measure univariate normality. According to Kline (2023), cutoff values for skewness and kurtosis are 3 and 10, respectively, which means that data is normal only if its skewness and kurtosis statistics lie within these ranges. **Table 4.3** clearly indicates that the values of skewness and kurtosis are well within the range, hence univariate normality has not been violated. Multivariate normality is measured with a scaling correction factor generated by Mplus. More than one (01) value of the scaling correction factor is an indicator of a violation of the normality assumption (Byrne, 2013). The scaling correction factor value for the data in the current study is 0.721, suggesting evidence of multivariate normality.

TABLE 4.2: Linearity Analysis

Linear Relations	Linear		Quadratic		Cubic	
	F STATS	P value	F STATS	P value	F STATS	P value
PL-LMX	127.99	0.00	65.08	00.00	65.09	00.00
PL-NA	79.74	00.00	44.69	00.00	44.69	00.00
PL-IWB	179.58	00.00	90.63	00.00	90.62	00.00
PL-TC	179.91	00.00	108.74	00.00	109.61	00.00
LMX-NA	37.44	00.00	26.84	00.00	26.01	00.00
LMX-IWB	135.31	00.00	69.17	00.00	47.25	00.00
NA-IWB	65.36	00.00	34.35	00.00	26.17	00.00
NA-TC	72.18	00.00	36.48	00.00	27.56	00.00

nj = 103, ni = 541

TABLE 4.3: Standardized loadings, Skewness, Kurtosis, Means, Standard Deviations

Latent Variable	Indicator	Standardized Loadings	Skewness	Kurtosis	Mean	Standard Deviation
PL	P1	1	-0.088	-0.771	-0.026	0.21
	P2	1.008	-0.147	-0.597	-0.015	0.214
	P3	1.082	-0.246	-0.462	-0.009	0.227
	P4	0.996	-0.149	-0.454	-0.023	0.206
	P5	0.95	-0.407	-0.039	-0.01	0.209
	P6	0.948	-0.24	-0.463	-0.016	0.2
	P7	1.018	-0.327	-0.33	0.002	0.228
	P8	0.941	-0.194	-0.365	-0.002	0.214
	P9	1.084	-0.251	-0.561	-0.005	0.213
	P10	0.951	-0.275	-0.256	-0.022	0.218
	P11	0.974	-0.339	-0.238	-0.019	0.205
	P12	0.96	-0.245	-0.345	-0.021	0.226
	P13	1.114	-0.33	-0.546	-0.021	0.208
	P14	0.978	-0.187	-0.445	-0.027	0.202
	P15	1.09	-0.272	-0.464	-0.025	0.227
	P16	0.924	-0.252	-0.289	-0.023	0.194
	P17	1.015	-0.339	-0.319	-0.052	0.206
	P18	0.976	-0.28	-0.363	-0.018	0.217
	P19	0.94	-0.346	-0.217	-0.022	0.196
	P20	1.06	-0.173	-0.696	-0.003	0.213
	P21	1.003	-0.259	-0.366	0.012	0.262
	P22	1.025	-0.241	-0.362	-0.015	0.211
LMXA	L1	1	-0.162	-0.992	-0.047	0.179
	L2	0.866	-0.145	-0.81	-0.028	0.188

Continued Table 4.3: Standardized loadings, Skewness, Kurtosis, Means, Standard Deviations

Latent Variable	Indicator	Standardized Loadings	Skewness	Kurtosis	Mean	Standard Deviation
TM	L3	0.952	-0.218	-0.768	-0.043	0.212
	L4	0.95	-0.233	-0.802	-0.03	0.204
	L5	0.981	-0.196	-0.963	-0.023	0.189
	L6	1.03	-0.098	-0.983	-0.008	0.21
	L7	0.888	-0.302	-0.705	-0.019	0.219
	TM1	1	-0.154	-0.92	-0.029	0.199
	TM2	1.017	-0.156	-0.891	-0.008	0.217
	TM3	1.059	-0.226	-0.843	-0.027	0.219
	TM4	0.844	-0.063	-0.704	-0.039	0.211
	TM5	1	-0.214	-0.865	-0.035	0.228
MI	TM6	1.061	-0.062	-1.006	-0.02	0.204
	TM7	0.869	-0.042	-0.841	-0.019	0.214
	TM8	0.627	-0.018	-0.714	-0.018	0.196
	TM9	0.708	-0.108	-0.941	-0.026	0.196
	TM10	0.636	0.232	-0.722	-0.023	0.207
	M1	1	-0.195	-0.663	-0.014	0.214
	M2	1.079	-0.271	-0.672	-0.039	0.169
	M3	0.966	-0.254	-0.661	-0.033	0.197
	M4	1.019	-0.295	-0.506	-0.043	0.202
	M5	1.03	-0.214	-0.639	-0.019	0.209
M6	1.176	-0.382	-0.694	-0.012	0.201	
M7	1.049	-0.243	-0.607	-0.031	0.227	
M8	1.111	-0.366	-0.65	-0.003	0.212	

Continued Table 4.3: Standardized loadings, Skewness, Kurtosis, Means, Standard Deviations

Latent Variable	Indicator	Standardized Loadings	Skewness	Kurtosis	Mean	Standard Deviation
NA	M9	1.193	-0.356	-0.659	-0.023	0.185
	M10	1.023	-0.311	-0.589	-0.018	0.193
	M11	1.13	-0.415	-0.573	-0.013	0.209
	M12	0.993	-0.19	-0.575	-0.033	0.197
	N1	1	-0.348	-0.648	-0.032	0.295
	N2	1.21	-0.239	-0.873	-0.011	0.196
	N3	1.228	-0.242	-0.892	-0.02	0.219
	N4	1.075	-0.217	-0.771	-0.024	0.197
	N5	1.181	-0.348	-0.779	-0.025	0.198
	N6	1.144	-0.262	-0.859	0.002	0.229
IWB	N7	1.214	-0.299	-0.924	0.027	0.231
	N8	1.223	-0.217	-0.915	0.005	0.216
	N9	1.117	-0.429	-0.649	-0.011	0.184
	N10	1.209	-0.287	-0.93	-0.013	0.198
	W1	1	-0.268	-0.874	-0.034	0.198
	W2	0.981	-0.147	-0.925	-0.048	0.184
	W3	0.949	-0.048	-0.875	-0.046	0.209
	W4	0.898	-0.162	-0.691	-0.029	0.213
	W5	0.97	-0.183	-0.697	-0.028	0.203
	W6	0.992	-0.261	-0.85	-0.031	0.208
TC	TC1	1	-1.083	0.61	-0.046	0.208
	TC2	0.873	-0.534	-0.362	-0.037	0.2
	TC3	0.848	-0.886	1.187	-0.027	0.216
	TC4	1.119	-0.587	-0.326	0.024	0.23

4.1.4 Non-zero Variance

It refers to a situation where the variance in a set of data is greater than zero (Field, 2013). Non-zero variance in a data set is the key requirement for testing hypotheses. All constructs in the study model have latent and observed variables; therefore, non-zero variance was assessed via multilevel confirmatory factor analysis using Mplus software. **Table 4.4** shows that all variables in the study have a variance greater than zero.

TABLE 4.4: Construct Variance

Constructs	σ^2
TCB	0.498
IWBB	0.435
NAB	0.328
LMXAB	0.743
IMB	0.116
TMB	0.338
PLB	0.23
PAB	0.197

Note: $n_j = 103$. $n_i = 541$, $\sigma^2 =$ Variance.

4.1.5 Multicollinearity

When two or more independent variables exhibit a strong correlation, this phenomenon is termed as multicollinearity. To assess multicollinearity, researchers often employ the "variance inflation factor (VIF)" and "tolerance" tests. Hair et al. (2010) proposed that a VIF value below 4 (< 4) and a tolerance level above

0.2 (> 0.2) are indicative of non-collinearity. **Table 4.5** shows that all values fall comfortably within these ranges, affirming that the dataset is free from multicollinearity concerns.

TABLE 4.5: Multicollinearity Results

Variable	Tolerance	VIF
Paradoxical Leadership	0.5	2
LMX Ambivalence	0.46	2.19
Negative Affective Tone	0.29	3.42
Individual Level Mindfulness	0.89	1.12
Innovative Work behavior	0.52	1.94
Team Level Mindfulness	0.86	1.16
Team Creativity	0.62	1.62
Positive Affective Tone	0.81	1.23

4.2 Decision for Covariates

Covariates are demographic variables that are not part of the primary model but potentially can cause variance in endogenous variables, including mediators and dependent variables. This study accounted for gender, age, education, general experience, departmental experience, and experience under the current supervisor as covariates based on previous studies. ANOVA was employed to test the variance in LMX ambivalence, negative affective tone, IWB, and “team creativity.” Results of **Table: 4.6** indicate that none of any variable cause any significant variance in endogenous variables so all have been excluded from the next analysis.

4.3 Independence of Observation

This assumption refers to the lack of a systematic relationship or correlation between individual cases in a group. Independent observations mean that the values or outcomes of one observation are not dependent on any other observation in a data set. Conversely, if the observations of a rater are dependent on other team members' observations in a group, this assumption is violated. Intraclass correlation (ICC) is considered the hallmark measure to test this assumption. ICC signifies "the expected correlation between any two randomly selected individuals in the same group" (Heck & Thomas, 2020).

TABLE 4.6: ANOVA

Demographics	Dependent Variables	F	Sig
Gender	LMX Ambivalence	1.43	0.23
	Negative Affective Tone	0.18	0.66
	Innovative Work behavior	0.75	0.38
	Team Creativity	0.01	0.95
Age	LMX Ambivalence	0.6	0.65
	Negative Affective Tone	1.45	0.21
	Innovative Work behavior	0.99	0.41
	Team Creativity	2.3	0.06
Education	LMX Ambivalence	0.75	0.58
	Negative Affective Tone	2.37	0.13
	Innovative Work behavior	4.2	0.11
	Team Creativity	0.97	0.43
Experience	LMX Ambivalence	0.44	0.5
	Negative Affective Tone	2.32	0.12
	Innovative Work behavior	1.73	0.15
	Team Creativity	0.41	0.75
Department Experience	LMX Ambivalence	4.41	0
	Negative Affective Tone	1.22	0.3
	Innovative Work behavior	1.56	0.19
	Team Creativity	1.38	0.24
Exp. With Supervisor	LMX Ambivalence	7.1	0
	Negative Affective Tone	1.93	0.1
	Innovative Work behavior	2.47	0.14
	Team Creativity	1.62	0.17

It is calculated by dividing group variance over total variance in a variable ($\sigma^2_b / \sigma^2_b + \sigma^2_w$). The cutoff point for ICC values is between 0 and 1. Greater value within the range provides justification for multilevel analysis. **Table 4.7** provides Muthen's ICCs for the latent variables of the study. As values are higher than 0.7, a cutoff point, it provides good justification for cross level analysis of the data.

TABLE 4.7: Inter Rater Reliability and Inter Rater Agreement

Factors	Factors's Muthen's ICC	Average Muthen's ICC(1)	Average Muthen's ICC(2)	Average Group rWG(J)
PL	0.94	0.96	0.52	0.85
NA	0.94	0.89	0.58	0.88
IM	0.92	0.87	0.43	0.71
LMXA	0.89	0.87	0.74	0.94
IWB	0.87	0.85	0.51	0.84
TM	0.89	0.86	0.45	0.76

ICC = Intraclass Correlation, Abbreviations: PL = Paradoxical Leadership LMXA= LMX Ambivalence, NA= Negative Affective, IM= Individual Level Mindfulness, IWB= Innovative Work behavior, TM= Team Level Mindfulness

For further confirmation, intraclass correlation individual rater ICC (1), intraclass correlation group mean ICC (2), and inter-rater reliability rwg(j) were calculated. The thresholds of ICC (1), ICC (2), and rwg(j) values are 0.25, 0.70, and 0.70, respectively. An ICC (1) value exceeding 0.25 indicates significant group effects, while ICC (2) statistics surpassing 0.70 signify substantial reliability in mean ratings across groups. Additionally, when the rwg(j) statistics exceed 0.70, it indicates a high level of agreement among raters (LeBreton & Senter, 2008).

Table 4.7 shows the values of ICC (1), ICC (2), and rwg(j) for paradoxical leadership, LMX ambivalence, negative affective tone, IWB, individual-level mindfulness, and team-level mindfulness, which are good enough to run cross level analysis. Team creativity was not included in this test because it was a group-level construct, and data was collected from supervisors for the whole team. As all the variables have high values for ICCs and rwg(j), therefore, all of them have been taken at level 2 and ‘between the level’ variances have been calculated for analysis following 2-2-2-2 approach.

4.4 Analysis Strategy

Clustered data from the study was analyzed by following the three-step procedure suggested by (Byrne, 2013). First, single-level confirmatory factor analysis (CFA) was performed while the data was not clustered at this step. After getting the satisfactory fit indices, in the second step, the data was clustered and multilevel confirmatory factor analysis (MCFA) was carried out. In the third step, multilevel hypotheses were tested using MSEM.

4.4.1 Validity of Measurement Model

Global fit indices are used to measure the validity of the model, such as Chi-square, comparative fit index (CFI), Tucker Lewis non-normed fit index (TLI), root mean square error of approximation (RMSEA), standardized root mean residuals (SRMR), etc. Hair et al. (2010). Chi-square explains the extent to which that model represents the population (Brown, 2015). Team creativity was not included in this test because it was a group-level construct, and data was collected from supervisors for the whole team. CFA and TLI (Bentler, 1990; Tucker & Lewis, 1973) indicate the fitness of the model by drawing a comparison between the baseline model and the hypothesized model. RMSEA (Steiger, 1980) reflects the degree to which the model represents the population (Brown, 2015). SRMR expresses the difference between observed and predicted correlations of the model (Brown, 2015).

4.4.2 Single Level CFA

Single-level CFA was performed for all seven variables of the study (PL, LMX ambivalence, negative affective tone, IWB, team creativity, individual-level mindfulness, and team-level mindfulness). This test confirms the structure of the model and determines the convergent and discriminant validity of modeled constructs. All seven factors were tested, and global fit indices proved the strength of the model ($\chi^2 = 4493.94$, $df = 3131$, $p = 0.00$, $RMSEA = .028$, $CFI = .939$, $TLI = 0.937$, $SRMR = 0.039$), which gives a clear indication to proceed to the two-level analysis.

4.4.3 Multilevel CFA

After a single-level CFA, a two-level measurement model was estimated. Global fit indices of MCFA produced satisfactory results ($\chi^2 = 7144.72$, $df = 5975$, $p = .000$, $RMSEA = .0029$, $CFI = .0.934$, $TLI = .0.931$, $SRMR_w = 0.068$, $SRMR_b = 0.076$). While sliding from single-level to multi-level analysis, a decrease in global fit indices can be witnessed, which is not surprising because of the elevated complexity of the model or the increase in the number of free parameters. **Table 4.8** indicates that the hypothesized seven-factor model yields better global fit indices as compared to alternative models. After confirming the validity of the multilevel seven-factor model, evaluations of common method bias, convergent, discriminant, and composite reliabilities were conducted at the between level analysis.

4.4.4 Competing Models

This strategy involves evaluating the relative goodness of fit indices between the proposed theoretical model and alternative models (Hair et al., 2010). The results from this analysis instill confidence that the hypothesized model is the most credible when contrasted with its alternatives. For this purpose, eight alternative cross-level models were compared. **Table 4.8** indicates that the global fit indices of the eight-factor model produced compelling evidence of its superiority over all other alternative models.

TABLE 4.8: Alternate Measurement Model at Two Levels

Alternate Models	χ^2	<i>df</i>	<i>RMSEACFI</i>	<i>TLI</i>	<i>SRMR_w</i>	<i>SRMR_b</i>	
8 factor model (PL LMXA NA PA IWB TC IM TM)	7144.72	5975	0.02	0.93	0.93	0.068	0.076
7 Factor Model (IM+TM combined on one factor)	7860.65	5982	0.04	0.85	0.84	0.071	0.082
6 Factor Model (IM+TM+NAT)	8412.34	5987	0.06	0.74	0.73	0.077	0.087
5 Factor Model (IM+TM+NAT+PAT)	9345.32	6001	0.07	0.63	0.61	0.084	0.093
4 Factor Model (IM+TM+NAT+PAT+LMXA)	10432.17	6009	0.08	0.57	0.56	0.088	0.098
3 Factor Model (IM+TM+NAT+PAT+LMXA+IWB)	10987.54	6012	0.08	0.51	0.52	0.092	0.142
2 Factor Model (IM+TM+NAT+PAT+LXMA+IWB+TC)	11764.78	6017	0.08	0.49	0.48	0.095	0.147
1 Factor Model (all factors loaded on a single factor)	12876.67	6024	0.09	0.39	0.37	0.098	0.154

Note: $n_j=103$, $n_i=541$. In every two-level model, each factor is composed of two sub-factors, that is, one at within group level and other at between group level. Abbreviations: LMXA= LMX Ambivalence, NAT= Negative Affective Tone, PAT=Positive Affective Tone, IM= Individual Level Mindfulness, IWB= Innovative Work behavior, TM= Team Level Mindfulness.

4.4.5 Common Method Bias (CMB)

CMB refers to the systematic measurement bias when data is collected using a single method via self-reported surveys. The covariance among variables or items may be inflated or distorted when all responses are collected using the same type of scale (Hair et al., 2010). As the data were collected from the survey method using rating scales, it is plausible to conduct CMB. For this purpose, Harman's one-factor test was implied (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). The test is conducted during MCFA when all the items of all variables are loaded on a one method factor and its indices are compared with the original model. Poor fit indices as compared to the original model indicate the absence of CMB (Mossholder, Bennett, Kemery, & Wesolowski, 1998). The same process was followed in the analysis, and the results of **Table 4.8** indicate that the cross-level one-factor model yields poor fit indices as compared to the seven-factor model ($\chi^2 = 12876.67$, $df = 6024$, $p = .000$, $RMSEA = 0.09$, $CFI = .039$, $TLI = 0.37$, $SRMR_w = 0.098$, $SRMR_b = 0.154$). Furthermore, CMB was addressed in the data collection process. Data were collected from dyads at different time lags. Data on PL, LMX ambivalence, negative affect, team-level mindfulness, and individual-level mindfulness were collected from team members at three time lags. Whereas, responses on IWB and team creativity were gauged from their respective supervisors at time 4. After addressing CMB, different validity tests were performed.

4.4.6 Convergent Validity and Construct Reliability

Convergent validity refers to the concept of determining to what extent a set of items measures the same construct for which they are intended to measure (Hair et al., 2010). Convergent validity can be assessed through average variance extracted (AVE). Convergent validity is established if the AVE of the construct is greater than 0.5 (Hair et al., 2010). AVE is "the average of the squared standardized pattern coefficients for indicators that depend on the same factor but are specified to measure no other factors" (Kline, 2023, p. 313). **Tables 4.9** and **4.10** show that the AVE (between and within levels) for all constructs which is greater than

0.5, proving the convergent validity of all seven variables. Construct reliability is the internal consistency or internal reliability of a measure. It quantifies how closely the items of a construct are interrelated with each other (Hair et al., 2010). Construct reliability can be gauged by using composite reliability (CR) (Jöreskog, 1971). CR is established if its value is greater than 0.7. Tables 4.9 and 4.10 (between and within levels) reflect CR values of all variables greater than 0.7, providing evidence of construct reliability.

TABLE 4.9: Convergent Validity & Composite Reliability (Between Level)

Constructs	Items	Standardized Factor Loading (λ)	AVE	CR
TC	TC1	0.795***	0.545	0.826
	TC2	0.652***		
	TC3	0.752***		
	TC4	0.746***		
IWB	W1	0.980***	0.976	0.999
	W2	0.976***		
	W3	0.951***		
	W4	0.998***		
	W5	1.000***		
	W6	0.998***		
NA	N1	0.999***	0.991	0.999
	N2	0.999***		
	N3	0.990***		
	N4	0.999***		
	N5	1.000***		
	N6	1.000***		
	N7	0.982***		
	N8	0.999***		
	N9	0.989***		
	N10	0.999***		
LMXA	L1	1.000***	0.963	0.994
	L2	1.000***		
	L3	0.998***		
	L4	0.998***		
	L5	1.000***		
	L6	1.000***		
	L7	1.000***		
IM	M1	0.997***	0.958	0.996
	M2	0.999***		
	M3	0.993***		
	M4	0.998***		

Continued Table 4.9: Convergent Validity & Composite Reliability (Between Level)

Constructs	Items	Standardized Factor Loading (λ)	AVE	CR
TM	M5	0.999***	0.995	0.999
	M6	0.922***		
	M7	0.998***		
	M8	0.999***		
	M9	0.878***		
	M10	0.998***		
	M11	0.955***		
	M12	0.999***		
	TM1	0.999***		
	TM2	0.999***		
PL	TM3	1.000***	0.976	0.999
	TM4	0.999***		
	TM5	0.999***		
	TM6	1.000***		
	TM7	0.997***		
	TM8	0.997***		
	TM9	0.994***		
	TM10	0.991***		
	P1	0.999***		
	P2	0.986***		
	P3	0.993***		
	P4	0.996***		
P5	0.998***			
P6	0.999***			
P7	0.955***			
P8	0.998***			
P9	0.999***			
P10	0.987***			
P11	0.982***			
P12	0.999***			
P13	0.999***			
P14	0.991***			
P15	0.998***			
P16	0.998***			
P17	0.999***			
P18	0.926***			
P19	0.995***			
P20	0.987***			
P21	0.948***			
P22	0.997***			

TABLE 4.10: Convergent Validity & Composite Reliability (within Level)

Constructs	Items	Standardized Factor Loading (λ)	AVE	CR
IWB	W1	0.572***	0.326	0.743
	W2	0.576***		
	W3	0.566***		
	W4	0.523***		
	W5	0.593***		
	W6	0.593***		
NA	N1	0.599***	0.405	0.871
	N2	0.690***		
	N3	0.681***		
	N4	0.634***		
	N5	0.597***		
	N6	0.596***		
	N7	0.603***		
	N8	0.661***		
	N9	0.662***		
	N10	0.629***		
LMXA	L1	0.377***	0.177	0.599
	L2	0.371***		
	L3	0.418***		
	L4	0.526***		
	L5	0.400***		
	L6	0.534***		
	L7	0.256***		
IM	M1	0.632***	0.435	0.902
	M2	0.664***		
	M3	0.594***		
	M4	0.637***		
	M5	0.656***		
	M6	0.731***		
	M7	0.646***		
	M8	0.667***		
	M9	0.725***		
	M10	0.643***		
	M11	0.668***		
	M12	0.642***		
PL	P1	0.507***	0.255	0.882
	P2	0.519***		
	P3	0.505***		
	P4	0.522***		
	P5	0.506***		

Continued Table 4.10: Convergent Validity & Composite Reliability (within Level)

Constructs	Items	Standardized Factor Loading (χ)	AVE	CR
	P6	0.496***		
	P7	0.500***		
	P8	0.510***		
	P9	0.514***		
	P10	0.56***		
	P11	0.469***		
	P12	0.463***		
	P13	0.519***		
	P14	0.530***		
	P15	0.543***		
	P16	0.445***		
	P17	0.538***		
	P18	0.452***		
	P19	0.495***		
	P20	0.510***		
	P21	0.494***		
	P22	0.485***		

Note: *** p_j .001. AVE = Average Variance Extracted, CR= Composite Reliability

4.4.7 Discriminant Validity

Discriminant validity determines the extent to which a variable can be distinguished from other related variables (Hair et al., 2010). This validity can be gauged by a set of two factor models. Items of the two variables are loaded on a single factor and MCFA results are computed and compared with the model when these two variables were separately loaded and tested. The difference between chi-square and df values of both tests is calculated. The existence of difference is the indicator of discriminant validity. The same process is repeated for all the pairs of the study variables. **Table 4.11** reflects the discriminant validity for all variables.

TABLE 4.11: Discriminant Validity

Factor pairs	1 Factor MCFA χ^2 (df)	2 Factor MCFA χ^2 (df)	$\Delta\chi^2$ (Δ df)	Discriminant Validity
PL-LMX	14342.22*** (4638)	14021.48*** (4636)	320.74*** (2)	Supported
PL-NA	13669.32*** (4632)	13318.36*** (4630)	350.96*** (2)	Supported
PL-IWB	14648.46*** (4640)	14126.96*** (4638)	521.51*** (2)	Supported
PL-TM	18141.42*** (6102)	17538.37*** (6100)	603.05*** (2)	Supported
PL-IM	13719.64*** (4628)	13241.65*** (4626)	477.99*** (2)	Supported
LMX-NA	19140.35*** (6132)	18790.17*** (6130)	350.18*** (2)	Supported
LMX-IWB	17496.34*** (4670)	17203.18*** (4668)	293.16*** (2)	Supported
LMX-IM	19112.65*** (6128)	18788.43*** (6126)	324.23*** (2)	Supported
LMX-TM	16512.34*** (4662)	16155.833*** (4660)	356.51*** (2)	Supported
NA-IWB	16183.24*** (4664)	15502.37*** (4662)	680.87*** (2)	Supported
NA-IM	17423.19*** (6122)	17022.80*** (6120)	400.39*** (2)	Supported
NA-TM	15863.44*** (4654)	15406.62*** (4652)	456.81*** (2)	Supported
IWB-IM	15863.44*** (4656)	15624.34*** (4654)	239.10*** (2)	Supported
IWB-IM	19738.52*** (6132)	19375.35*** (6130)	363.18*** (2)	Supported
IM-TM	17563.63*** (4836)	17214.56*** (4834)	349.07*** (2)	Supported

Note: $n_j = 103$. $n_i = 541$. *** $P < .001$.

4.4.8 Nomological Validity

Nomological validity of the modelled variables suggests the correlation between them (Hair et al., 2010). It assesses whether the constructs of the study behave in the similar way as theorized. It is measured with correlation analysis which expresses the strength and direction of relationship between two variables (Field, 2013). **Table 4.12** shows between level correlations among all the seven variables. These statistics show that paradoxical leadership is positively correlated with LMX ambivalence, individual level mindfulness, positive affect, innovative work behavior, team creativity and team level mindfulness ($r = 0.68, p < 0.05, r = 0.04, p = ns, r = 0.14, p < 0.05, r = 0.78, p < 0.05, r = 0.76, p < 0.05, r = 0.57, p < 0.05$) while it is negatively correlated with negative affect ($r = -0.52, p < 0.05$).

LMX ambivalence is positively correlated with individual level mindfulness, positive affect, negative affect, innovative work behavior, team creativity and team level mindfulness ($r = 0.15, p < 0.05, r = 0.24, p < 0.05, r = 0.21, p < 0.05, r = 0.64, p < 0.05, r = 0.38, p < 0.05, r = 0.22, p < 0.05$). Individual level mindfulness is positively correlated with positive affect, innovative work behavior, team creativity and team level mindfulness ($r = 0.06, p = ns, r = 0.06, p = ns, r = 0.08, p = ns, r = 0.14, p < 0.05$) while it has negative correlation with negative affect ($r = -0.21, p < 0.05$). It assesses whether the constructs of the study behave in the similar way as theorized. It is measured with correlation analysis which expresses the strength and direction of relationship between two variables.

Positive affect is positively associated with innovative work behavior, team creativity and team level mindfulness ($r = 0.83, p < 0.05, r = 0.68, p < 0.05, r = 0.46, p < 0.05$) and negatively correlated with negative affect ($r = -0.64, p < 0.05$). Negative affect is negatively correlated with innovative work behavior, team creativity and team level mindfulness ($r = -0.44, p < 0.05, r = -0.48, p < 0.05, r = -0.47, p < 0.05$). Innovative work behavior is positively correlated with team creativity and team level mindfulness ($r = 0.67, p < 0.05, r = 0.44, p < 0.05$) whereas team creativity is positively correlated with team level mindfulness ($r = 0.54, p < 0.05$). Correlation results for within analysis have been presented in table 4.13.

TABLE 4.12: Cross Level Correlation Analysis (Between Level)

Variables	MEANS	SD	PL	LMX	IM	PA	NA	IWB	TC	TM
PL	3.36	0.69	1							
LMXA	3.27	0.92	0.68**	1						
IM	3.44	0.8	0.04	0.15*	1					
PAT	3.34	0.78	0.14**	0.24*	0.06	1				
NAT	3.13	0.96	-0.52**	0.21*	-0.21**	-0.64**	1			
IWB	3.26	0.89	0.78**	0.64**	0.06	0.83**	-0.44**	1		
TC	3.68	0.76	0.76**	0.38**	0.08	0.68**	-0.48**	0.67**	1	
TM	3.14	0.84	0.57**	0.22*	0.14*	0.46**	-0.47**	0.44**	0.54**	1

TABLE 4.13: Cross level Correlation Analysis (Within Level)

Variables	MEANS	SD	PL	LMX	IM	PA	NA	IWB
PL	3.36	0.69	1					
LMXA	3.27	0.92	0.12	1				
IM	3.44	0.8	0.33**	0.01	1			
PA	3.34	0.78	0.06	0.03	0.05	1		
NA	3.13	0.96	-0.18**	0.48**	-0.30**	-0.24**	1	
IWB	3.26	0.89	0.25**	0.29**	0.23**	0.25**	-0.22**	1

nj= 103, ni= 541, ”* p<.05, **p<.01 (2-tailed).” Abbreviations: PL = Paradoxical Leadership, LMXA= LMX Ambivalence, NAT= Negative Affective Tone, PAT=Positive Affective Tone, IM= Individual Level Mindfulness, IWB= Innovative Work behavior.

4.4.9 Multilevel Structural Equation Model (MSEM)

The MSEM technique was employed to test the hypotheses of the study because of the high ICCs' and $\text{rwg}(j)$ values for all the variables computed in Section 4.2. Variables were taken at level 2 for calculating 'between the level' statistics. This approach has established its superiority over competing approaches such as MLM (Preacher, Zhang, & Zyphur, 2011). P-values were used to test the significance of direct hypotheses, whereas indirect and moderating effects were calculated using both p-values (Preacher & Selig, 2012).

4.5 Hypothesis Testing

4.5.1 Direct and Indirect Effects

Results of the direct relationship have been discussed in this section. **Table 4.14** and **4.15** summarizes the statistical findings to support or reject the study hypothesis:

H1, which posits a positive relationship between paradoxical leadership and innovative work behavior, found support in the study findings ($\gamma = 0.39$, $p < 0.05$).

H2, which proposes a positive relationship between paradoxical leadership and LMX ambivalence, also received support ($\gamma = 0.81$, $p < 0.05$).

H3, suggesting a positive association between LMX ambivalence and innovative work behavior, was similarly supported ($\gamma = 0.59$, $p < 0.05$).

H4, which anticipates a positive association between LMX ambivalence and negative affective tone, garnered support ($\gamma = 0.74$, $p < 0.05$).

H5, which suggests a negative relationship between negative affective tone and innovative work behavior, was corroborated by the study ($\gamma = -0.46$, $p < 0.05$).

H6, which claims a positive relationship between paradoxical leadership and team creativity, also found support ($\gamma = 1.11$, $p < 0.05$).

H7, which proposes a positive association between paradoxical leadership and a negative affective tone, was not supported γ by the findings ($\gamma = -1.53$, $p < 0.05$).

The coefficient value is significant but negative, demonstrating that paradoxical leadership is “significantly and negatively” related to a negative affective tone.

H8, which posits that negative affective tone is negatively related to team creativity, did not find support ($\gamma = -0.20$, $p = \text{ns}$).

H9, which expects a positive relationship between LMX ambivalence and team creativity, was supported ($\gamma = 0.59$, $p < 0.05$).

H10, which states that LMX ambivalence mediates the relationship between paradoxical leadership and innovative work behavior, received support ($\gamma = 0.47$, $p < 0.05$, Monte Carlo 95% CI = 0.26 to 0.69).

H11, which proposes that negative affective tone mediates the relationship between LMX ambivalence and innovative work behavior, found support ($\gamma = -0.35$, $p < 0.05$, Monte Carlo 95% CI = -0.79 to -0.29).

H12 suggests that negative affective tone mediates the relationship between paradoxical leadership and team creativity and did not find support ($\gamma = 0.30$, $p = \text{ns}$, Monte Carlo 95% CI = -0.13 to 0.06).

H13, stating that negative affective tone mediates the relationship between LMX ambivalence and team creativity, also did not find support ($\gamma = -0.15$, $p = \text{ns}$, Monte Carlo 95% CI = -0.28 to 0.64).

H14 claims that LMX ambivalence mediates the relationship between paradoxical leadership and team creativity and received support ($\gamma = 0.35$, $p < 0.05$, Monte Carlo 95% CI = 0.28 to 0.47).

H15, stating that paradoxical leadership is negatively associated with innovative work behavior via the sequential mediation of LMX ambivalence and negative affective tone, was supported ($\gamma = -0.28$, $p < 0.05$, Monte Carlo 95% CI = -0.64 to -0.24).

H16, which proposes that paradoxical leadership is negatively associated with team creativity via sequential mediation of LMX ambivalence and negative affective tone, did not find support ($\gamma = 0.14$, $p = \text{ns}$, Monte Carlo 95% CI = -0.43 to 0.50).

TABLE 4.14: Cross Level SEM Analysis for Direct Effects

	Direct Effects	γ	SE	t
H1	Paradoxical Leadership → Innovative Work behavior	0.39**	0.08	5.09
H2	Paradoxical Leadership → LMX Ambivalence	0.81**	0.1	7.79
H3	LMX Ambivalence → Innovative Work behavior	0.59**	0.15	4.03
H4	LMX Ambivalence → Negative Affective Tone	0.74**	0.12	6.17
H5	Negative Affective Tone → Innovative Work behavior	-0.46**	0.14	-3.2
H6	Paradoxical Leadership → Team Creativity	1.11**	0.16	6.87
H7	Paradoxical Leadership → Negative Affective Tone	-1.53**	0.28	-5.48
H8	Negative Affective Tone → Team Creativity	-0.2	0.18	-1.09
H9	LMX Ambivalence → Team Creativity	0.59**	0.12	5.09

ni = 541, nj = 103, “*p < 0.05, **p < 0.01”

TABLE 4.15: Cross Level SEM Analysis for Indirect Effects

	Indirect Effects	γ	SE.	t	LLCI	ULCI
H10	Paradoxical Leadership → Innovative Work behavior (Via LMX Ambivalence)	0.47**	0.11	4.23	0.26	0.69
H11	LMX Ambivalence → Innovative Work behavior (Via Negative Affective Tone)	-0.35*	0.28	-1.25	-0.79	-0.29
H12	Paradoxical Leadership → Team Creativity (Via Negative Affective Tone)	0.3	0.25	1.2	-0.13	0.06
H13	LMX Ambivalence → Team Creativity (Via Negative Affective Tone)	-0.15	0.3	-0.52	-0.28	0.64
H14	Paradoxical Leadership → Team Creativity (Via LMX Ambivalence)	0.35*	0.33	1.19	0.28	0.47
H15	Paradoxical Leadership → Innovative Work behavior (Via LMX Ambivalence and Negative Affective Tone)	-0.28*	0.22	-1.27	-0.64	-0.24
H16	Paradoxical Leadership → Team Creativity (Via LMX Ambivalence and Negative Affective Tone)	-0.12	0.19	0.63	-0.43	0.38

$n_i = 541, n_j = 103, *$ $p < 0.05, **p < 0.01$ Monte-Carlo 95% Confidence Intervals

4.5.2 Moderation Results

Tables 4.16 and 4.17 show the results of moderation analysis H17, suggesting that ‘Individual level mindfulness moderates the positive relationship between LMX ambivalence and negative affect in such a way that this relationship is weaker when mindfulness is high than when mindfulness is low’ was supported by the findings presented in the table 4.16 ($\gamma = -0.29$, $p < .05$, $R^2 = 0.38$, $p < .05$).

The slope test confirms that as individual-level mindfulness increases by one degree (from low to high), the positive relationship between LMX ambivalence and negative affective tone weakens ($\gamma = 0.78$, $CI = 0.60$ to 1.18 , $\gamma = 0.75$, $CI = 0.63$ to 1.08 , $\gamma = 0.71$, $CI = 0.66$ to 0.99).

This effect is further clarified by the mod graph (Fig. 4.1). It is clear that as individual-level mindfulness increases, the positive relationship between LMX ambivalence and negative affective tone weakens. The line representing this positive relationship becomes less steep at a high level of mindfulness, clearly indicating the moderating effect. Therefore, hypothesis is supported by the mod graph.

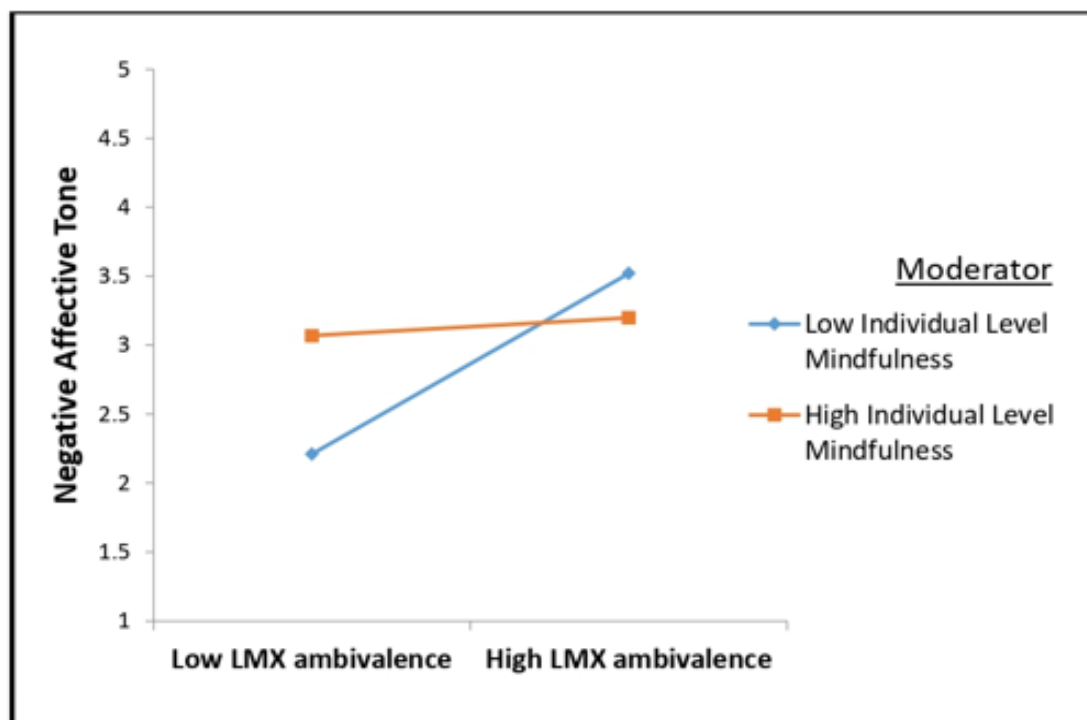


FIGURE 4.1: Mod Graph for Individual Level Mindfulness on LMX Ambivalence and Negative Affective Tone

TABLE 4.16: Moderation: Individual Level Mindfulness

For LMX ambivalence-Negative affective tone (H17)	γ	SE.	R²S
Constant	3		
LMX Ambivalence → Negative affective tone	0.74**	0.22	
Individual level mindfulness → Negative affective tone	-0.13	0.12	
LMX Ambivalence x Individual level Mindfulness → Negative affective tone	-0.29**	0.19	0.38**
<i>“Conditional Effects of Moderator ± 1 SD (Slope Test)”</i>	γ	LL95%CI	UL95%CI
Individual level mindfulness (Low)	0.78	0.6	1.18
Individual level mindfulness (Medium)	0.75	0.63	1.08
Individual level mindfulness (High)	0.71	0.66	0.99
For Negative affective tone-IWB (H18)	γ	SE.	R²
Constant	3.31		
Negative affective tone → IWB	-0.46**	0.14	
Individual level mindfulness → IWB	0.35**	0.37	
Negative affective tone x Individual level mindfulness → IWB	0.08	0.11	0.07
<i>“Conditional Effects of Moderator at ± 1 SD (Slope Test)”</i>	γ	LL95%CI	UL95%CI
Individual level mindfulness (Low)	-0.49	-1.04	0.57
Individual level mindfulness (Medium)	-0.46	-0.93	0.34
Individual level mindfulness (High)	-0.43	-0.82	0.12

$n_i = 541$, $n_j = 103$ * $p < .05$, $p^{**} < .01$, LL = “Lower Limit,” UL = “Upper limit,” CI = “Confidence interval,” SD = “Standard deviation,” S.E. = “Standard error” IWB = “Innovative Work Behavior”

H18 suggests that “individual-level mindfulness moderates the negative relationship between negative affective tone and innovative work behavior in such a way that this relationship is weaker when mindfulness is high than when it is low.” Table 4.16 indicates that H18 was not supported ($\gamma = .08$, $p = ns$. $R^2 = 0.07$, $p = .ns$). But the slope test shows that as mindfulness increases from low to high, the negative influence of negative affective tone on IWB decreases ($\gamma = -.49$, $CL = -1.04$ to 0.57 , $\gamma = -.46$, $CL = -.93$ to 0.34 , $\gamma = -.43$, $CL = -.82$ to 0.12). Moreover, the same inference could be drawn from mod graph which shows that at a high level of mindfulness, the line representing the negative relationship between the said variables becomes less steep. (Fig. 4.3).

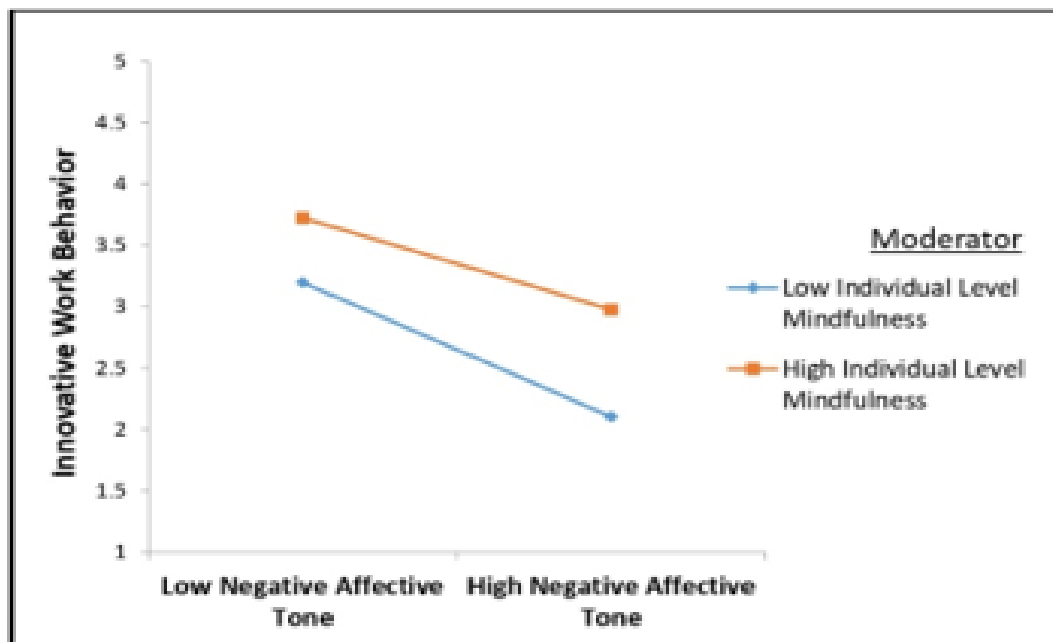


FIGURE 4.2: Mod Graph for Individual Level Mindfulness on LMX Ambivalence and Negative Affective Tone

H19: Hypothesis states that “team level mindfulness moderates the positive relationship between paradoxical leadership and negative affective tone, such that when team level mindfulness is high (low), paradoxical leadership has a weaker (stronger) relationship with negative affective tone.” Study results of **Table 4.17** do not support this hypothesis which indicates that team-level mindfulness moderates the “positive relationship between paradoxical leadership and negative affective tone” even though statistics are significant.

TABLE 4.17: Moderation: Team Level Mindfulness

For Paradoxical leadership- negative affective tone (H19)	γ	SE.	R²
Constant	3		
Paradoxical leadership → Negative affective tone	-1.53 **	0.28	
Team level mindfulness → Negative affective tone	-0.14	0.5	
Paradoxical leadership x Team level mindfulness → Negative affective tone	-0.39**	0.1	.51**
<i>“Conditional Effects of Moderator at ± 1 SD (Slope Test)”</i>	γ	LL95%CI	UL95%CI
Team level mindfulness (Low)	-0.5	-0.73	-0.39
Team level mindfulness (Medium)	-0.53	-0.83	-0.51
Team level mindfulness (High)	-0.74	-1.02	-0.76
For “negative affective tone-Team creativity” (H20)	γ	SE.	R²
Constant	3.2		
Negative affective tone” → Team creativity	-0.2	0.18	
Team level mindfulness → Team creativity	.40**	0.28	
Negative affective tone x Team level mindfulness → Team creativity	0.06	0.13	0.19
<i>“Conditional Effects of Moderator at ± 1 SD (Slope Test)”</i>	γ	LL95%CI	UL95%CI
Team level mindfulness (Low)	-0.31	-0.39	1.01
Team level mindfulness (Medium)	-0.2	-0.32	0.72
Team level mindfulness (High)	-0.08	-0.28	0.45

$n_i = 541$, $n_j = 103$, * $p < .05$, $p^{**} < .01$, LL = “Lower Limit,” UL = “Upper limit,” CI = “Confidence interval,” SD = “Standard deviation,” S.E. = “Standard error”

Findings demonstrate that the “interactive effect” of paradoxical leadership and mindfulness was significant ($\gamma = -0.39$, $p < .05$, $R^2 = .51$, $p < .05$). The reason is that hypothesis 7 theorized the positive relationship between PL and the negative affective tone, which was not supported. The coefficient values were negative and significant, meaning that paradoxical leadership negatively influences the negative affective tone. Now, in this hypothesis, the positive and significant values of the coefficient shows that mindfulness strengthens the “negative relationship between paradoxical leadership and negative affective tone.” The slope test indicates that when team-level mindfulness was low, the impact of paradoxical leadership on negative affect was negative and low ($\gamma = -0.50$, $CL = 0.33$ to 0.79), but when team-level mindfulness was high, the negative influence of PL on negative affective tone was increased ($\gamma = -0.74$, $CL = -1.02$ to -0.76).

Mod graph gives strength to this premise that the negative relation between paradoxical leadership and negative affective tone was weaker when team level mindfulness was low and stronger when team level mindfulness was high. The slope became steeper at a high level of team mindfulness (see Fig. 4.3).

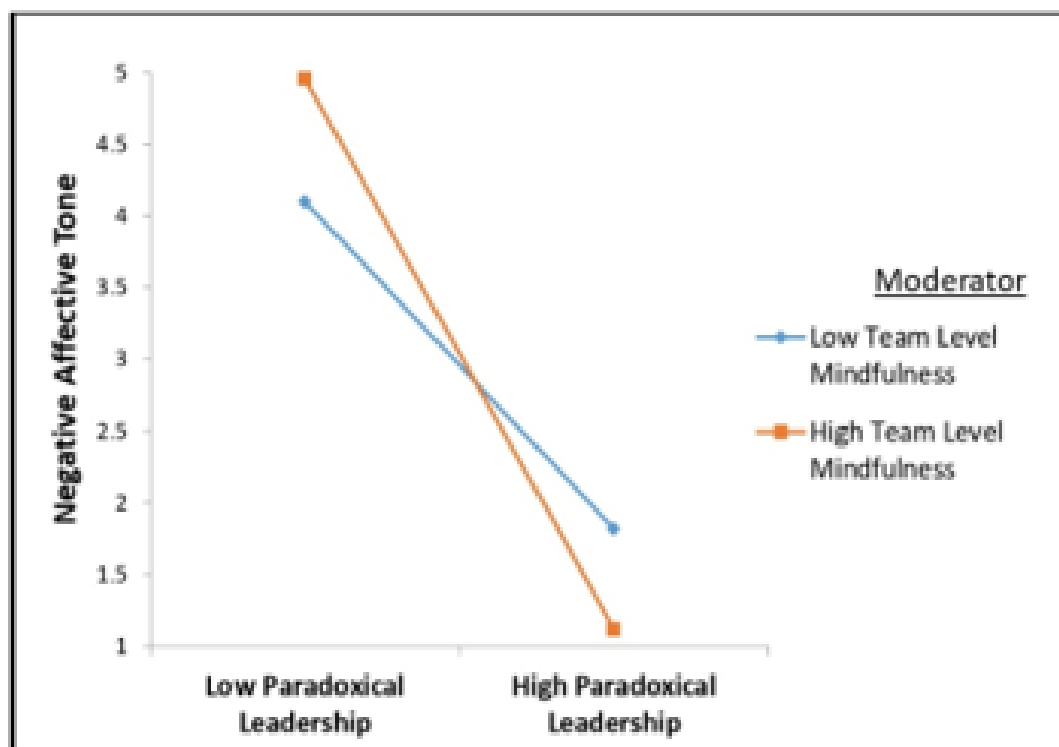


FIGURE 4.3: Mod Graph for Team Level Mindfulness on Paradoxical Leadership and Negative Affective Tone

H20 suggests that team level mindfulness moderates the negative relationship between negative affective tone and team creativity, such that when team level mindfulness is high (low), negative affect has a weaker (stronger) relationship with team creativity.

Results from **Table 4.17** indicates that the interactive effect of negative affective tone and team mindfulness is insignificant on team creativity ($\gamma = 0.06$, $p = ns$, $R^2 = 0.19$, $p = ns$). Whereas the slope test indicates that the negative coefficients were decreased from low to high level of mindfulness ($\gamma = -0.31$, $CI = -0.39$ to 1.01 , $\gamma = -0.20$, $CI = -0.32$ to 0.72 , $\gamma = -0.08$, $CI = -0.28$ to 0.45).

From **Figure 4.4**, the mod graph shows that when team-level mindfulness was high, the line representing the influence of negative affective tone on team creativity was less steep than when it was low.

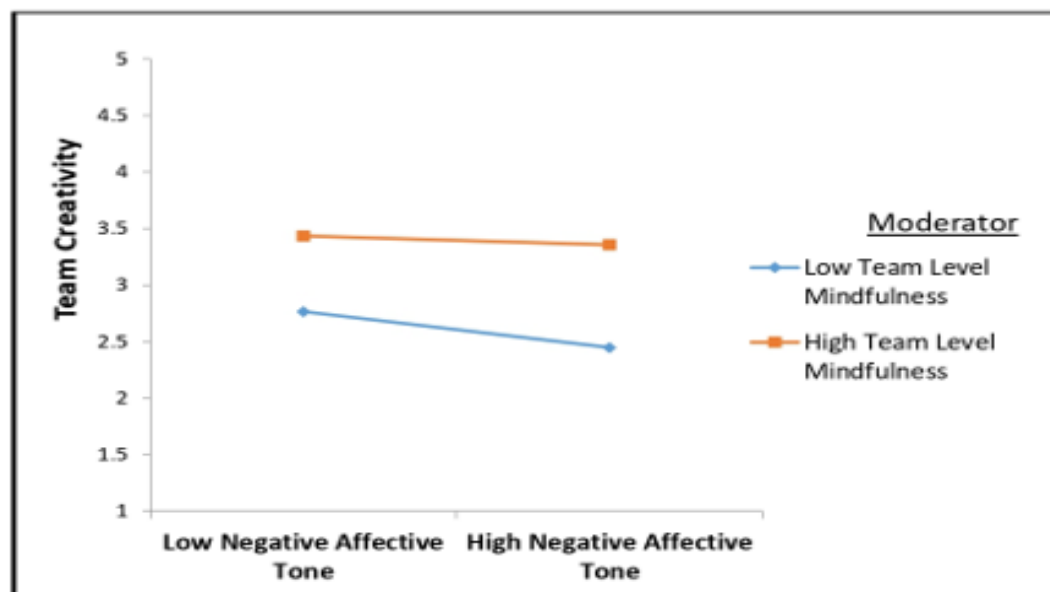


FIGURE 4.4: Mod Graph for Team Level Mindfulness on Negative Affective Tone and Team Creativity

4.5.3 Moderated Mediation Results

Table 4.18 shows the results of moderated mediation hypotheses. H21 states that the indirect effect of LMXA on IWB via negative affective tone is moderated by individual-level mindfulness.

TABLE 4.18: Moderated Mediation Analysis

For LMX ambivalence – NAT - IWB (Moderating effect of Individual Level Mindfulness)				γ	SE.	t	LL95%CI	UL95%CI
H21	Individual	level	mindfulness	-0.042	0.092	-0.458	-0.223	0.138
	(Low)							
	Individual	level	mindfulness	-0.038	0.089	-0.452	-0.214	0.124
	(Medium)							
	Individual	level	mindfulness	-0.027	0.086	-0.446	-0.206	0.09
	(High)							
							R2	0.18
For PL – NAT - TC (Moderating effect of Team Level Mindfulness)								
H22	Team level	mindfulness	(Low)	-0.024	0.039	-0.655	-0.988	0.34
	Team level	mindfulness	(Medium)	0.141	0.17	0.831	-0.77	0.489
	Team level	mindfulness	(High)	0.288*	0.204	1.472	0.559	0.643
							R2	0.29*

$n_i = 541$, $n_j = 103$, “* $p < 0.05$, ** $p < 0.01$ ”, CI = Confidence Intervals, Abbreviations: NAT = Negative Affective Tone, IWB = Innovative Work Behavior, PL= Paradoxical Leadership, TC= Team Creativity.

This means that higher (lower) the individual level of mindfulness, lower (higher) the intensity of negative affective tone, and stronger (weaker) the positive relationship between LMX ambivalence and IWB. This hypothesis did not find support ($\gamma = -.042$, CI= $-.22$ to $.14$, $\gamma = -.038$, CI= $-.21$ to $.12$, $\gamma = -.027$, CI= $-.20$ to $.09$).

H22 suggests that the indirect effect of PL on team creativity via negative affective tone is moderated by team-level mindfulness. This means a higher (lower) the team-level mindfulness, a lower (higher) the intensity of negative affective tone, and stronger (weaker) the positive relationship between PL and team creativity. This hypothesis was supported by the study findings ($\gamma = -.02$, CI= $-.98$ to $.34$, $\gamma = 0.14$, CI= -0.77 to 0.49 , $\gamma = 0.29$, CI= 0.56 to $.64$).

TABLE 4.19: Summary of Hypothesis Supported/ not Supported

No	Hypothesis Statement	Decision
H1	Paradoxical leadership is positively related to innovative work behavior.	Supported
H2	Paradoxical leadership is positively related to LMX ambivalence.	Supported
H3	LMX ambivalence is positively associated with IWB.	Supported
H4	LMX ambivalence is positively related to negative affective tone.	Supported
H5	Negative affective tone is negatively related to IWB.	Supported
H6	Paradoxical leadership is positively related to team creativity.	Supported
H7	Paradoxical leadership is positively related to negative affective tone.	Not Supported
H8	Negative affective tone is negatively related to team creativity.	Not Supported
H9	LMX ambivalence is positively related to team Creativity.	
H10	LMX ambivalence mediates the relationship between paradoxical leadership and innovative work behavior.	Supported
H11	Negative affective tone mediates the relationship between LMX ambivalence and innovative work behavior.	Supported
H12	Negative affective tone mediates between paradoxical leadership and team creativity.	Not Supported
H13	Negative Affect mediates the relationship between LMX ambivalence and team creativity	Not Supported

Continued Table 4.19: Summary of Hypothesis Supported/ not Supported

No	Hypothesis Statement	Decision
H14	LMX ambivalence mediates the relationship between PL and team creativity.	Supported
H15	PL is negatively associated IWB via the sequential mediation of LMX ambivalence and negative affective tone.	Supported
H16	PL is negatively associated team creativity via sequential mediation of LMX ambivalence and negative affective tone.	Not Supported
H17	Individual-level mindfulness moderates the positive relationship between LMX ambivalence and negative affect in such a way that this relationship is weaker when mindfulness is high than when mindfulness is low.”	Supported
H18	Individual-level mindfulness moderates the negative relationship between negative affective tone and innovative work behavior in such a way that this relationship is weaker when mindfulness is high than when it is low.	Not Supported
H19	Team level mindfulness moderates the positive relationship between paradoxical leadership and negative affective tone, such that when team level mindfulness is high (low), paradoxical leadership has a weaker (stronger) relationship with negative affective tone.	Not Supported
H20	Team level mindfulness moderates the negative relationship between negative affective tone and team creativity, such that when team level mindfulness is high (low), negative affective tone has a weaker (stronger) relationship with team creativity.	Not Supported
H21	The indirect effect of LMXA on IWB via negative affective tone is moderated by individual-level mindfulness. This means that higher (lower) the individual level of mindfulness, lower (higher) the intensity of negative affective tone, and stronger (weaker) the positive relationship between LMX ambivalence and IWB.	Supported
H22	The indirect effect of PL on team creativity via negative affective tone is moderated by team-level mindfulness. This means a higher (lower) the team-level mindfulness, a lower (higher) the intensity of negative affective tone, and stronger (weaker) the positive relationship between PL and team creativity.	Not Supported

Chapter 5

Discussion and Conclusion

The fifth chapter addresses the hypothesized links between various variables and their status, whether empirically supported or not. It also provides theoretical reasons and analyses through the lens of previous research. This dissertation examined a multilevel model with fifteen hypotheses, three connected to mediation analysis and four to moderation analysis.

5.1 Discussion on Model

Although all intimate relationships are ambivalent, management literature has recently acknowledged the occurrence of ambivalence in organizations. It is a well-known fact that organizations are manifestations of several forms of relationships, with the leader-follower relationship being the most important for organizational performance. Only a few researchers have examined LMX ambivalence and its effects on organizations. This dissertation attempts to reveal the determinants and consequences of LMX ambivalence via various mediating and moderating processes. The study also reveals determinants of individual and team-level innovation and creativity via two streams of variables. Stream 1 examines paradoxical leadership as a predictor of LMX ambivalence, negative affective tone, and IWB as consequences. Stream 2 reveals the impact of paradoxical leadership on team creativity via the LMX ambivalence and negative affective tone as a mediating mechanism. Furthermore, individual and team level mindfulness were used as

moderating variables at the individual and team levels, respectively. As a result, it contributes to the literature on ambivalence, innovation, and creativity.

5.2 Paradoxical Leadership and Innovative Work Behavior

The first hypothesis was that “paradoxical leadership is positively related to IWB.”

The first hypothesis was supported by empirical data and analysis, which demonstrated that leaders who exhibit paradoxical behaviors are better able to foster innovativeness among followers. The findings are consistent with earlier research; for example, [Ishaq et al. \(2021\)](#) proposed that a leader’s paradoxical behaviors influence employees’ innovative efforts through role modeling. Leaders face environmental challenges; such leaders, via paradoxical cues, allow followers to watch and learn required behaviors with an open mind and curiosity. Dynamic work environments and evolving demands permit followers to comprehend the intricacies of the leader’s evolving cognitions and behaviors and replicate those behaviors during the work.

To inspire innovation in their subordinates, paradoxical leaders exercise autonomy and control. Followers can master experiences, open their minds to inquiry, and openly question and discuss ideas when they have autonomy. Such leaders see autonomy as a valuable tool for developing novel solutions, but it is a double-edged sword. Excessive autonomy may lead to increased freedom, resulting in mistakes and unethical or unlawful conduct. By setting individual and organizational goals, leaders’ controlling actions rigidly adhere to followers rules and duties. Paradoxical leaders clarify individual and organizational values, integrate individual and organizational priorities, and bring excessive autonomy under control, which helps followers create not only novel but valuable ideas, products, and services ([Yang et al., 2021](#)).

The study’s findings are further supported by [Shao et al. \(2019\)](#), who suggested paradoxical leader behaviors correlated with increased creativity in followers. These researchers found a correlation between creativity and two aspects of paradoxical

leadership. First, autonomy allows employees to defy pre-established assumptions and conventions, driving them to convergent and divergent thinking, which is required for innovative ideas. In contrast, control binds them to organizational norms and boundaries. Second, flexibility increases employees' ability to think freely and confidence in making mistakes, which is required for innovative behaviors due to the risk associated with such behaviors. On the structural side, these leaders keep a distance and stress regulations to fulfill deadlines and achieve performance goals. Other researchers have also noted paradoxical behaviors with innovation and creativity (Liu, Wei, et al., 2022) (Yi, Mao, & Wang, 2019).

Furthermore, affective event theory also posits that contextual factor such as paradoxical leadership results in behavioral outcomes such as innovative work behaviors (Weiss & Cropanzano, 1996).

5.3 Paradoxical Leadership and LMX Ambivalence

The second hypothesis states that “paradoxical leadership is positively related to LMX ambivalence.”

This hypothesis is verified by the study's findings, which reveal that paradoxical leadership promotes LMX ambivalence. Since LMX ambivalence is a novel concept that has only recently been presented in management literature, a little is known about its predictors and consequences (Lee, Thomas, Geoff, et al., 2019). For the first time, this study seeks to fill this gap by investigating paradoxes from the leader's perspective that are responsible for producing ambivalent tensions in followers. LMX ambivalence occurs when a follower has high and low-quality relationships with the leader. It is suggested that leaders express expectations for future high or low-quality relationships with followers during the role-making process (Pengs et al., 2019; Han, 2020). Paradoxical leaders may communicate ambiguous or conflicting expectations to their followers via paradoxical clues, causing uncertainty and stress, and leaving followers in an ambivalent situation.

A paradoxical leader follows “both-and” approach, enforce strict adherence to rules and regulations, and shows authoritarian behaviors to get performance outcomes and meet deadlines (Zhang et al., 2015). These behaviors are taken as unfavorable and interpreted as low-quality LMX. On the other hand, leaders expect out-of-the-box thinking and solutions to the problem. In this regard, such leaders give autonomy and flexibility to followers, allow them to question and debate openly, promote convergent and divergent thinking, and permit them to make mistakes. Such behaviors of the leader are considered positive and regarded as high-quality LMX. When followers encounter both high and low-quality LMX simultaneously, they experience ambiguity, confusion, and experience LMX ambivalence (Lee, Thomas, Geoff, et al., 2019). The study findings are consistent with previous research; for instance, Zhang et al. (2022) suggested that individuals low in holistic thinking regard controlling behaviors of the leader as negative and a barrier to autonomy. Whereas such followers view autonomy and flexibility provided by the leader as positive signs, they regard them as delegation tactics. These opposing assessments of the leader may cause followers to experience subjective ambivalence. In another study, Chen and Weng (2022) established that the simultaneous occurrence of authoritarian and benevolent leadership behaviors evokes LMX ambivalence in followers. They contended that authoritarian leaders demand strict adherence to their employees’ authority, rules, and job descriptions. The leader’s simultaneous presentation of such contrasting cognitions may create ambivalent experiences. AET posits that environmental factors predict workplace hassles that impact behaviors. It is argued that paradoxical leadership as an important contextual factor generates workplace hassles such as LMX ambivalence that further predicts behaviors.

5.4 LMX Ambivalence and Innovative Work Behavior

According to hypothesis three, “LMX ambivalence is positively associated with innovative work behavior.”

As LMX ambivalence is a novel conceptualization, study results confirm for the first time that LMX ambivalence enhances innovative work behaviors in followers. LMX ambivalence is an attitudinal and relational variant that generally yields adverse outcomes. The findings contradict previous research, suggesting that LMX ambivalence has negative consequences. For instance, [Lee, Thomas, Geoff, et al. \(2019\)](#) empirically established the negative impact of LMX ambivalence on performance. These scholars suggest that ambivalent relationships are unpredictable and are associated with increased stress ([Uchino et al., 2007](#)). Moreover, LMX ambivalence violates the basic consistency principle, arouses aversive feelings in followers, projects discomfort and pain, and therefore needs more psychological resources as a coping strategy. Similarly, [Chen et al. \(2020\)](#) found LMX ambivalence negatively influences proactive work behaviors. These researchers contended that because LMX ambivalence is aversive in its feelings, it diverts attentional resources from work toward a coping mechanism. But the same researchers also found that LMX ambivalence is likely to reduce unethical pro-organizational behaviors. They argued that LMX ambivalence is stressful for followers and propels them to preserve their psychological and attentional resources ([Hobfoll, 1989](#)), preventing them from engaging in unethical pro-organizational behaviors. This line of reasoning strengthens our argument that LMX ambivalence can produce beneficial outcomes, such as innovative work behaviors in followers.

Our findings are consistent with earlier research indicating that ambivalent individuals can better interact, communicate knowledge, overcome competition, and do better at work ([Rothman & Melwani, 2017](#); [Zou & Ingram, 2013](#)). [Guarana and Hernandez \(2015\)](#) suggested that dyadic ambivalent relationships may produce mutually functional outcomes such as idea sharing, reciprocal problem solving, joint cognitive processing capabilities, etc. Although these relationships are a source of stress, they also foster trust and sympathy ([Ingram & Zou, 2008](#)) and exhibit commitment by accepting the costs and rewards inherent in such relationships ([Bushman & Holt-Lunstad, 2009](#)). In addition, [Zhao and Zhou \(2021\)](#) proposed a paradoxical perspective of leader-follower ambivalence and considered ambivalence as a source of seeking information, opinions, or guidance due to paradoxical cues, which generates proactive behaviors such as innovative work behaviors.

5.5 LMX Ambivalence and Negative Affective Tone

Hypothesis 4 proposes that “LMX ambivalence is positively related to negative affective tone.”

The study’s findings confirmed the fifth hypothesis: that LMX ambivalence has the potential to cause negative affect. These findings are consistent with previous research that has revealed negative affect as a result of relational ambivalence (Lee, Thomas, Geoff, et al., 2019; Van Harreveld et al., 2015; Rothman et al., 2017; Tsai & Lu, 2019). Ambivalence is characterized by aversive feelings that contradict basic consistency principles and can elicit a negative emotional response. This is because people have the drive and propensity to be consistent. Individuals with LMX ambivalence have bivalent cognitions of high and low-quality relationships with the leader, which contradicts basic consistency norms (Festinger, 1957) and produces unpleasant emotional responses.

Further, ambivalent individuals experience a discrepancy between their actual attitude (ambivalent) and their ideal attitude (univalent), which can lead to affective responses (Higgins, 1987). According to AET, work hassles elicit emotional responses. LMX ambivalence refers to unpleasant feelings about the leader that might cause followers to have an adverse emotional reaction.

5.6 Negative Affective Tone and IWB

The fifth hypothesis suggested that “negative affective tone is negatively related to IWB.”

The study’s findings supported the hypothesis that negative affect reduces innovative work behavior. There is an almost unanimous consensus in the literature that positive affect induces innovation, while negative affect has inconclusive results. This is because the link between negative affect and creativity is more complex since more psychological processes are involved. The study’s findings are consistent with previous researchers who argue that negative affect reduces innovation

(Nijstad et al., 2010), but contradict those who found negative affect to be a stimulator of creativity (Du et al., 2021; Madrid & Patterson, 2018) and those who denied any relationship between negative affect and creativity (To, Fisher, & Ashkanasy, 2015).

As the primary cause of stress, negative affect consumes energy and psychological resources, reducing attentional focus and preventing a person from being rational, thereby impeding creativity (Baumann & Kuhl, 2002). An individual in a negative emotional state analyzes skewed information, perceives only one side of the picture, and adopts avoidant behavior rather than approach tendencies, which inhibits positive investments in the innovative process and therefore moves away from goal achievement (Rietzschel, 2011).

5.7 Paradoxical Leadership and Team Creativity

Hypothesis 6 states that “Paradoxical leadership is positively related to team creativity.”

The study’s findings support the hypothesis that paradoxical leadership boosts team creativity. Because paradoxical leadership is particular to individual and team levels of innovation and creativity, the findings are consistent with previous studies indicating paradoxical leadership is positively related to team creativity (Li et al., 2018; Shao et al., 2019). The literature discusses five contradictory dimensions of leadership, but two of them are particularly important for creativity and innovation. The first is autonomy versus control, and the second is structure versus flexibility. Team members are given the flexibility and freedom to decide, discuss, and express diverse views with an open mind. Such leaders provide freedom and liberty to take the initiative, make mistakes, and therefore instill task proficiency, adaptiveness, and proactive behaviors in team members. Paradoxical leaders help team members understand their roles, prepare them to deal with stress and crises, and inspire them to be self-directed enough to initiate change efforts. On the controlling side, paradoxical leaders maintain structural requirements by emphasizing rules and roles. Team members are required to adhere to regulations to meet

deadlines and performance outcomes strictly. Such leaders maintain distance by enforcing work requirements. These simultaneous paradoxical requirements make team members more alert and vibrant to meet the challenges of the changing work environment. Team members are initially surprised by paradoxical demands from the leader, but gradually direct more attentional resources towards the work and try to understand the position and challenges of the leader, which drive them to a creative problem-solving approach (Zhang et al., 2015).

AET posits that work hassles modify behaviors. When team members confront contradictory demands from the leader, they first regard them as work hassles, allowing them to dedicate more psychological and attentional resources to such paradoxes. This helps team members understand the environment's challenges and the leader's position in addressing those challenges. Team members' focused attention helps them develop innovative and creative solutions to meet challenging situations.

5.8 Paradoxical Leadership and Negative Affective Tone

The seven hypothesis of the study states that “paradoxical leadership is positively related to negative affective tone.”

The study's findings do not support the hypothesis that paradoxical leadership enhances negative affect; surprisingly, the results are not insignificant but rather interesting and exciting. The negative beta value ($b = -0.53$, $p = .000$) indicates that paradoxical leadership is negatively associated with a negative affective tone (despite a positive relationship being hypothesized). These results provide a new insight into the phenomenon that, instead of inciting negative moods, paradoxical leadership reduces the negative emotionality of the team members. The literature on negative affectivity is sparse and generally presents negative affect as the outcome of conflicts and paradoxes. It was argued that paradoxical leadership stresses paradoxical demands such as exploration and exploitation, flexibility

and control, uniformity and individualization, etc. According to consistency theories, these competing demands create dissonance (Festinger, 1957) and discomfort, which tend to be aversive, create a discomfoting experience, and lead to negative affective responses. But the findings of the study showed contradictory results.

Although there is insufficient evidence in the literature on the relationship between paradoxical leadership and affectivity, some studies have found a positive relationship between paradoxical leadership and positive affect, which helps us understand how paradoxical leadership reduces negative affect. For example, Chen et al. (2021) discovered that paradoxical leaders' behaviors boost positive affect. Furthermore, according to Park, Shim, Hai, Kwon, and Kim (2021), paradoxical leadership is an excellent source of support for employees since it gives them liberty and flexibility. Employees benefit from such an environment because it allows them to develop their personal skills and capacities, resulting in positive affect while minimizing negative emotional states such as anxiety and stress.

Similarly, Yang et al. (2021) found paradoxical leadership enhancing employees' thriving at work. Thriving involves learning (the cognitive component) and vitality (the affective component). According to self-determination theory, autonomy, competence, and relatedness are the three basic needs (Deci & Ryan, 1985). Paradoxical leaders' "autonomy and control" provide autonomy, "distance and closeness" provide relatedness, and "equal treatment for all" provide competence to the followers, which increases vitality, a positive affective state while mitigating negative affective states.

5.9 Negative Affective Tone and Team Creativity

Hypothesis 8 proposed that "negative affective tone is negatively related to team creativity."

The study's results do not support this hypothesis, which proposes that a team's negative affectivity hinders team creativity. The literature on negative affectivity and team creativity relationships yields inconclusive results because negative

affectivity involves complex psychological processes. The study's findings are consistent with (Grawitch et al., 2003), who found no relationship between negative affect and team creativity but inconsistent with (Tsai et al., 2012), who established a positive relationship between negative affect and team creativity. These researchers contend that negative affect alerts team members to possible shortcomings and problems with the situation, increasing team creativity. Results are also inconsistent with Rhee (2007), who advocated the harmful impact of negative affect on team creativity as it inhibits social interaction and the morale of the team members.

Positive affect is identified by greater pleasantness and high physiological activation, whereas negative affect is characterized by high unpleasantness and increased physiological activation. Previous research suggested that positive and negative affect operates through independent underlying processes based on an approach-avoidance system (Carver & Scheier, 1999). Team members experiencing negative moods use an avoidance strategy for potentially risky behaviors, whereas team members experiencing positive moods take an engagement approach. Innovation and creativity are risky behaviors; team members with a negative mood disengage themselves from such behaviors, remain idlers, and show no concern for taking any risks.

5.10 LMX Ambivalence and Team Creativity

Hypothesis nine, stating that LMX ambivalence is positively related to team creativity, was accepted by the study findings.

Research on LMX ambivalence is scant, and its concentration is more dilute on teams. The findings of the study are consistent with previous research that suggested a positive association between LMX ambivalence and employee creativity (Huang et al., 2022). These researchers proved that ambivalence in dyadic relationships enhances cognitive flexibility, helps to evaluate divergent perspectives on a problem, and drives people to make balanced choices among different alternatives, which consequently enhances creativity. Plambeck and Weber (2009) also

proposed that a CEO's ambivalence on a particular issue increases the possibility of an extensive search to find a suitable response, and the actions taken are of greater scope, risk, and novelty.

From the findings of the study and the arguments presented by the past research, it is rightly assumed that software team members in ambivalent situations from their supervisors process the information more systematically as the 'both and' approach enhances their sensitivity about the environment. The team members openly discuss the situation with all its pros and cons, share their ideas and counter-ideas, analyse different possibilities, and reach the best solution by keeping emotions aside. Furthermore, the study verifies Ashforth's contradictory experiential response style framework (Ashforth et al., 2014). These researchers expressed four ways of handling contradictions, i.e., evading, controlling, compromising, and integrating. Team members with ambivalent cognitions about their supervisors consciously adopt a controlling strategy, i.e., they control negative thoughts and focus more on positive experiences, more objectively analyse the situation, and eventually select and adopt better choices.

5.11 LMX Ambivalence: A Mediator between Paradoxical Leadership and IWB

The tenth hypothesis of the study states that "LMX ambivalence mediates the relationship between PL and IWB."

For the first time, the current study's findings demonstrate that LMX ambivalence mediates between paradoxical leadership behaviors and employees' innovative work behaviors. Our study results align with previous research in that Chen and Weng (2022) have used LMX ambivalence as a mediator between authoritarian-benevolent leadership and unethical pro-organizational behaviors. Paradoxes and inconsistencies in a leader's behaviors are sources of stress and tension for the followers. These findings are consistent with past research, which claims paradoxes and inconsistencies are significant sources of ambivalence (Lee, Thomas, Geoff, et al., 2019; Suurd Ralph & Barling, 2022).

Leaders' positional powers give them much control, as they can hire or fire, allocate essential resources, and recommend followers for rewards and promotions. Generally, followers hesitate to discuss issues concerning leaders' behaviors and remain in stress and chaos. As a result, followers simultaneously develop opposing orientations toward the leader (high- and low-quality relationships) (Lee, Thomas, Geoff, et al., 2019). Such followers deploy more attentional resources toward every bit of information from the leader to understand the leader's position.

Such ambivalent attitudes towards a leader increase environmental sensitivity by expanding cognitive flexibility. Individuals in this state consider more alternatives and ideas to reach a creative and innovative decision as well as the leader's demands. Although studies on leader-follower perspectives are sparse, the current study's findings confirm that relational ambivalence can generate positive outcomes such as creativity (Fong, 2006; Rothman et al., 2017). In addition, AET suggests that environmental factors such as paradoxical leadership behaviors generate hassles such as LMX ambivalence that produce certain behaviors such as innovative work behaviors.

5.12 Negative Affect: A Mediator between LMX Ambivalence and IWB

Hypothesis 11 proposes that “negative affective tone mediates the relationship between LMX ambivalence and IWB.”

Findings from the current study confirm the role of negative affect as a mediator between LMX ambivalence and innovative work behaviors. Although this mediating link has been analyzed for the first time, previous research shows ambivalence is positively associated with negative affect (Lee, Thomas, Geoff, et al., 2019; Tsai & Lu, 2019), and some researchers have proposed a negative relationship between negative affect and innovation or creativity (Nijstad et al., 2010). AET further reinforces these findings by arguing that individuals who have contradictory high- and low-quality relational cognitions (work hassles) about the leader are more

likely to experience aversive feelings and thoughts, which may result in a negative emotional reaction. These emotional responses, according to theory, impact behaviors. Individuals who are affected negatively lose psychological resources and attentional concentration, negatively impacting their innovative behaviors.

5.13 Negative Affective Tone: A Mediator between Paradoxical Leadership and Team Creativity

Hypothesis 12 of the study suggests that “negative affective tone mediates between paradoxical leadership and team creativity relationships.”

The study’s findings do not support this hypothesis, implying that a negative affective tone at the team level does not mediate the relationship between paradoxical leadership and team creativity. This is because paradoxical leadership has a negative and significant relationship with negative effective tone, whereas negative effective tone has no relationship with team creativity. So, it is pretty understandable that path a is significant, but path b is insignificant, which indicates no mediation (Preacher & Hayes, 2004). The results are consistent with those of some researchers who claim paradoxical leadership has an inverse relationship with negative affective tone (Chen et al., 2021) and those who claim negative affective tone has no link with team creativity (Grawitch et al., 2003).

The findings are pretty exciting and understandable that a team is an entity having different emotional processes. For instance, any incident might evoke negative emotions in any team member at any time, but it is not necessary that the whole team experiences the same emotions at that particular time. Emotions in the team spread through the emotional contagion process, and many team members must experience the same emotions with nearly the same intensity. The team, as a collective mind, judges a paradoxical leader’s behavior more objectively. Paradoxical leaders provide them with liberty, flexibility, and autonomy, which enhance positive affective states while reducing negative affectivity. On the other hand, if

the negative affective tone is set in a team for a long time, it will become the norm and will not hinder or foster creativity.

5.14 Negative Affective Tone: A Mediator between LMX Ambivalence and Team Creativity

Hypothesis 13 which proposes that negative affective tone mediates between LMX ambivalence and team creativity is not supported by the results.

Hypothesis 4, which states that LMX ambivalence is positively associated with negative affective tone, was supported, whereas hypothesis 8, which states that negative affective tone is negatively related to team creativity, was not supported. As path 'a' was supported and path 'b' was not supported, the rejection of mediation is quite understandable. Previous research also recognized the negative relationship between LMX ambivalence and negative affect. For instance, [Lee, Thomas, Geoff, et al. \(2019\)](#) found a negative relationship between LMX ambivalence and negative affect. Studies on negative affect and team creativity are sparse, and the existing research produces inconclusive findings. Some studies show a positive association between negative affect and team creativity ([Zhang & Su, 2020](#)), while others suggest a negative association ([Acar, Tadik, Myers, Van der Sman, & Uysal, 2021](#); [Mao, Chang, Gong, & Xie, 2021](#)).

5.15 LMX Ambivalence: A Mediator between PL and Team Creativity

Hypothesis 14 which intended that LMX ambivalence mediates the relationship between PL and team creativity was supported.

The two contributing hypotheses, H2 and H9, received substantial support from the data, thus confirming the acceptance of mediation. Hypothesis 2 expresses a

positive association between PL and LMX ambivalence. The study has established this link for the first time. Paradoxical leadership behaviors, such as surfacing innovative ideas through flexibility while simultaneously exerting control to meet deadlines, create contradictory feelings about the leader, resulting in a complex, ambivalent cognitive experience. Furthermore, paradoxical leadership and LMX ambivalence are characterized by a 'both-and' approach, as advocated by (Guarana & Hernandez, 2015). They argue that LMX ambivalence is a natural consequence of paradoxical leadership. Hypothesis 9, which states that LMX ambivalence is positively related to team creativity, also garnered empirical support in the study. When team members experience ambivalent cognitions about their supervisor, they tend to emphasize positive experiences and minimize negative cognitions due to heightened sensitivity to their environment. This increased cognitive breadth fosters divergent thinking and encourages the consideration of out-of-the-box solutions. Consequently, both path 'a' and 'b' are found to be statistically significant, providing robust evidence in favor of the acceptance of the hypothesis.

5.16 Sequential Mediation of LMX Ambivalence and Negative Affective Tone between PL and IWB

H15 which suggests that PL is negatively associated with IWB via sequential mediation of LMX ambivalence and negative affective tone was supported.

The study's results confirm Hypothesis 2, which posited a positive association between PL and LMX ambivalence. Furthermore, they support Hypothesis 4, which suggested a positive link between LMX ambivalence and negative affective tone, and Hypothesis 5, proposing a negative relationship between negative affective tone and IWB. As a result, it is reasonable to accept Hypothesis 15. Moreover, AET suggests that environmental factors such as PL lead to work events, i.e., LMX ambivalence. These work events result in an emotional response, which in our case is negative affect. This affective response influences certain affect-based behaviors which in this case is IWB.

PL as an environmental factor triggers confusions and tensions and engenders high- and low-quality feelings about the leader, called LMX ambivalence (Guarana & Hernandez, 2015). LMX ambivalence is a conflicting experience about the relationship of the follower with the leader in which a follower experiences both high-quality and low-quality relationships with the leader. This interpersonal conflict leads to a negative affective experience (Lee, Thomas, Geoff, et al., 2019), which diminishes extra-role behaviors such as IWB.

5.17 Sequential Mediation of LMX Ambivalence and Negative Affective Tone between PL and Team Creativity

H16 which proposes a negative association between PL and team creativity via negative affective tone was not supported by the study results.

The reason is that study findings support hypothesis 2, which suggests a positive association between PL and LMX ambivalence, and hypothesis 4, which proposes a positive relationship between LMX ambivalence and negative affective tone, but do not support hypothesis 8, which states a negative association between negative affective tone and team creativity. The results show that paths ‘a’ and ‘b’ were supported, but path ‘c’ was not supported. As innovation and creativity are risky behaviors, team members with negative moods disengage themselves from such behaviors and show no concern for creativity. Negative affective tone is complicated in nature, so literature produces inconclusive findings in this regard. The results for path ‘c’ are consistent with the previous researchers who suggest no relationship between negative affective tone and team creativity (Grawitch et al., 2003), but inconsistent with those who claim a negative relationship (J. M. George & Zhou, 2007) and with those who suggest a positive relationship between them (Rhee, 2007). The reason is that team members with negative moods use an avoidance strategy to avoid potentially risky behaviors. As innovation and creativity are risky behaviors, team members with negative moods disengage themselves from such behaviors and show no concern for creativity.

5.18 Mindfulness: A Moderator between LMX Ambivalence and Negative Affective Tone

Hypothesis 17 states that “individual-level mindfulness moderates the positive relationship between LMX ambivalence and negative affect in such a way that this relationship is weaker when mindfulness is high than when mindfulness is low.”

The study’s findings support the hypothesis that individual-level mindfulness reduces the positive relationship between LMX ambivalence and negative affect. LMX ambivalence is a conflicting orientation for followers, and studies constantly reveal the buffering character of mindfulness for conflicts and emotions. The study’s findings are consistent with previous research that shows mindfulness as a moderator of various conflicts and emotions. For instance, (Olafsen et al., 2021), noted that mindfulness mitigates the positive relationship between basic psychological needs and frustration and burnout. Similarly, Montani et al. (2020) found mindfulness as a buffer between role conflict and cognitive adjustment and argued that a high level of mindfulness strengthens this relationship. Mindfulness has three main elements: present focus, attention to internal and external stimuli, and analyzing the information non-judgmentally (Hyland et al., 2015). Subordinates with high mindfulness who find themselves in a state of conflict about their relationship with the leader pay full attention to the signals coming from the leader, remain watchful about their internal aversive feelings and try to analyze the behaviors of the leader according to the situation and environment. Such individuals take this stressor (LMX ambivalence) with an open mind while keeping themselves separate from the problem, which helps them preserve their energies. By being attentive and aware of the current situation and having precise information, these subordinates are less likely to cultivate negative affectivity. The findings also endorse AET, which holds that individual dispositional characteristics are important in mitigating the relationship between work hassles and negative affective responses. LMX ambivalence, as a work hassle, evokes aversive feelings in subordinates which can lead to negative affectivity. However, if subordinates are high in mindfulness, they remain attentive to the leaders’ behaviors, assess such behaviors impartially, and attempt to comprehend leaders’ positions. They also

try to understand their own roles, so they are less prone to cultivating negative affectivity.

5.19 Mindfulness: A Moderator between Negative Affective Tone and IWB

H18 stating that mindfulness moderates between negative affective tone and IWB did not garnered support from the findings.

Although the interaction term is insignificant, but slope of the mod graph suggests that at high level of mindfulness, the steepness of the curve decreases showing decrease in the negative association of negative affective tone and IWB. The same inference can be drawn from slope test statistics that show decrease in negative co-efficient values as mindfulness increases (table 4.16; $\gamma_{low} = -0.49$ p=ns to $\gamma_{high} = -0.43$ p=ns). The results are consistent with the previous research. For instance, [Lu et al. \(2019\)](#) suggested the absence of any moderating effects of mindfulness on stress and subjective wellbeing. Similarly, [Chen et al. \(2020\)](#) also found that mindfulness did not moderate the relationship between social support and post-traumatic growth (PTG). One possible justification could be that a software development team member's experience of stress and other negative affect at a low degree and mindfulness may not be beneficial at a lower level of negative affective experience. Previous research also supports the notion that mindfulness could yield its dividends only at high levels of strain ([Creswell & Lindsay, 2014](#)).

Moreover, mindfulness could be beneficial at the initial level of negative affective experience. According to Monitor and Acceptance Theory (MAT), team members initially monitor the situation with full attention, and if they find it compromising their benefits or resources, then 'acceptance' starts, which is the second phase of the theory and helps team members control their negative emotions ([Lindsay & Creswell, 2017](#)). According to MAT, mindfulness starts playing its role at the very initial level of emotional experience through its monitoring function and gradually controls the negative motions, but the theory does not give enough justification for how mindfulness would play its role if negative affect overwhelmed an individual.

Another possible justification could be that once negative affect comes to play, it starts narrowing down attentional span and carried away the team members' from present situation by limiting their focus which detract the team members from their goal accomplishment (Higgins, 1987), nudges them to avoidant approach hence decreasing their investments on innovative behaviors (Rietzschel, 2011). In such conditions, negative emotions consume psychological resources due their prevalence and team members direct its energies to preserve maximum resources hence lose their present focus and awareness of the thoughts and emotions coming to them for better understanding of the situation which is the hallmark feature of mindfulness.

Another potential explanation for this phenomenon may be the way negative emotions can impact individuals. When negative emotions come into play, they tend to narrow an individual's attention span, diverting team members from their current situation and limiting their focus. This diversion hinders team members from achieving their goals (Higgins, 1987). Negative emotions can also incline individuals toward an avoidant approach, reducing their willingness to invest in innovative behaviors (Rietzschel, 2011). In such circumstances, negative emotions tend to consume a significant amount of psychological resources. Team members may then allocate their additional energies towards conserving these resources, thereby losing their present focus and becoming less aware of their own thoughts and emotions. This diminished awareness contrasts with the key characteristic of mindfulness, which involves a better understanding of one's own thoughts and emotions by having present focus and awareness.

5.20 Mindfulness: A Moderator between PL and Negative Affective Tone

Hypothesis 19 states that team level mindfulness moderates the positive relationship between paradoxical leadership and negative affective tone, such that when team level mindfulness is high (low), paradoxical leadership has a weaker (stronger) relationship with negative affective tone.”

The results of the study do not validate this hypothesis, which states that team mindfulness moderates the positive relationship between paradoxical leadership and negative affective tone. Despite the rejection of hypotheses, beta values are significant ($\gamma_{\text{int}} = -0.39$, $p < 0.05$; $\gamma_{\text{low}} = -0.50$, $p < 0.05$; $\gamma_{\text{medium}} = -0.53$, $p < 0.05$; $\gamma_{\text{high}} = -0.74$, $p < 0.05$) providing fascinating and counterintuitive insights. In the previous discussion of hypothesis 7, study results established that paradoxical leadership was negatively related to team creativity (the hypothesis was not supported because a positive relationship was theorized). In this section, coefficient values are again significant, which means team mindfulness moderates the negative impact of the paradoxical leadership-team creativity relationship rather than moderating the positive impact of the paradoxical leadership-team creativity relationship. Furthermore, the stepwise increase in negative coefficient values (from low to high) suggests that the negative relationship is strengthening as team mindfulness increases.

In other words, findings suggest that paradoxical leadership diminishes negative affectivity, and team-level mindfulness helps elevate this negative relationship. The higher the level of team mindfulness, the lower the level of negative affectivity among the team members, and the stronger the negative relationship between PL and negative affect. The results are consistent with previous research. For instance, (Schindler, Pfattheicher, & Reinhard, 2019), in a meta-analysis, surfaced the fact that brief mindfulness training decreases negative affect. The study findings are inconsistent with those of (Lu et al., 2019), who suggested that mindfulness did not buffer between stress and overall subjective wellbeing.

Mindful team members are better able to observe the thoughts and emotions coming to their mind with an open-minded curiosity, identify the information with consciousness, and view it with great clarity and objectivity (Hülshager et al., 2014). Team members try to visualize and understand the position of the paradoxical leader due to the present focus and awareness properties of mindfulness. They engender feelings of empathy, and hence, instead of being carried away with negative emotions, they take a positive and logical view of the situation while keeping themselves away from negative reflection.

5.21 Mindfulness: A Moderator between Negative Affective Tone and Team Creativity

Hypothesis 20 states that team-level mindfulness moderates the negative relationship between negative affective tone and team creativity, such that when team-level mindfulness is high (low), negative affective tone has a weaker (stronger) relationship with team creativity, which is not supported by the study findings. Although the hypothesis did not gather support, the slope test clearly shows that as mindfulness rose from low to high, the reverse relationship between negative affective tone and team creativity diminished gradually (table 4.17; $\gamma_{\text{low}} = -.042$, CI= -.22 to.14, $\gamma_{\text{medium}} = -.038$, CI= -.21 to.12, $\gamma_{\text{high}} = -.027$, CI= -.20 to.09). Furthermore, the steepness of the line showing a negative association between negative affective tone and team creativity becomes less steep from low to high levels of mindfulness (see figure 4.4). Study findings are consistent with previous research indicating the absence of any significant buffering role of mindfulness on negative affect. For instance, (Carpenter, Conroy, Gomez, Curren, & Hofmann, 2019) found no significant correlation between anxiety, depression, and post-traumatic stress disorder symptoms and mindfulness. Furthermore, the findings are inconsistent with Creswell and Lindsay (2014), who advocated strongly for the buffering role of mindfulness to attenuate negative affectivity. The reason may be that mindfulness can attenuate negative affect when it comes to play at the very beginning of the process, but once the negative affect overwhelms an individual, it consumes cognitive and emotional resources.

5.22 LMX Ambivalence and IWB: Moderated Mediated Analysis

Hypothesis 21 states that the indirect effect of LMX ambivalence on IWB via negative affective tone is moderated by individual-level mindfulness. This means that a higher (lower) the individual level of mindfulness, lower (higher) the intensity

of negative affective tone, and stronger (weaker) the positive relationship between LMX ambivalence and IWB, garnered support from study results.

The study findings are consistent with moderated mediated impact of mindfulness and social media use on fear of COVID 19 from Pakistani organizations (Majeed et al., 2020). These researchers suggest mindfulness as a very important personal resource to attenuate fear of COVID 19. The mindfulness property of being attentive and aware of the present experience helps team members observe and identify the feelings or thoughts coming from the external environment more objectively (Hülshager et al., 2014). Team members disengage themselves from subjective experiences and hence take a more logical and realistic view of the situation, which helps to lower the negative affective states. As a next step, the attentional property of mindfulness was activated. In this stage, the energy consumed by the negative affect is conserved, which enables the team members to invest available energy and cognitive resources in innovative endeavors (Good et al., 2016).

5.23 PL and Team Creativity: Moderated Mediated Analysis

Hypothesis 22 suggests that ‘the indirect effect of PL on team creativity via negative affective tone is moderated by team-level mindfulness. This means higher (lower) the team-level mindfulness, lower (higher) the intensity of negative affective tone, and stronger (weaker) the positive relationship between PL and team creativity’, was not supported by the results.

Findings are aligned with (Lu et al., 2019), who denied the role of mindfulness as a buffering agent for stress reduction. Furthermore, (Chen et al., 2020) could not find a significant impact of mindfulness as a moderator between social support and posttraumatic growth. It appears that mindfulness might be more effective during the initial stages, especially when negative affect first arises. However, as negative affect becomes prevalent, it tends to consume energy and psychological resources. The two facets of mindfulness, nonjudgmental acceptance and awareness, are impeded by negative affect which ultimately reduces mindfulness.

In fact, greater psychological resources and energies are required to diminish the influence of negative affect. Similar findings were reported by (Karl & Fischer, 2022), who observed that negative affect tends to reduce mindfulness. Their research explored the reciprocal relationship between negative affect and mindfulness. On the basis of findings from esteemed scholarship, it is reasonable to conclude that a high level of negative affect can diminish team members' ability to practice nonjudgmental acceptance and act with awareness, two essential components of mindfulness.

5.24 Theoretical Implications

The study under discussion focuses on three major areas: ambivalence, innovation and creativity, and paradoxical framing. Ambivalence is a relatively new concept in management literature, and researchers have called for more investigations in this area. However, there has been a lack of research on dyadic ambivalence, particularly LMX ambivalence. Until recently, only a few studies had investigated this concept and found negative consequences for performance (Lee, Thomas, Geoff, et al., 2019; Chen & Weng, 2022). These scholars have called for more studies with positive outcomes. This study is the first attempt to examine innovative work behaviors as the positive outcome of LMX ambivalence. As such, it contributes to both the LMX ambivalence literature by predicting IWB as the positive outcome and the IWB literature by suggesting LMX ambivalence as a unique predictor of the construct.

This study adopts a multilevel perspective to examine the phenomenon. At the individual level, the analysis and findings show that paradoxical leadership is a significant predictor of both LMX ambivalence and innovative work behavior. This study is one of the pioneering investigations that empirically demonstrate LMX ambivalence as an outcome of paradoxical leadership, which contributes to the paradox literature. The findings also contribute to paradoxical leadership literature by suggesting LMX ambivalence as an important predictor of paradoxical leadership behavior. Negative affect is an area that has been under-studied in management literature. Until recently, only one study by Lee and colleagues has

shown a positive link between LMX ambivalence and negative affect (Lee, Thomas, Geoff, et al., 2019). The results of this study confirm Lee and colleagues' findings and note that LMX ambivalence is positively associated with negative affect. Furthermore, this study shows that negative affective tone at the individual level is negatively associated with innovative work behavior, and mediates the relationship between LMX ambivalence and innovative work behavior. This study contributes to the literature by elucidating negative affect as a mechanism between LMX ambivalence and innovative work behavior.

Moreover, this study reveals for the first time that individual-level mindfulness moderates the positive relationship between LMX ambivalence and negative affect at level 1. Although previous studies have consistently suggested the role of mindfulness as a moderator in different links to neutralize negative emotions, this study is the first to reveal the buffering role of mindfulness in the LMX ambivalence-negative affect relationship. At the team level, the relationship between paradoxical leadership and team creativity has been less researched. However, this study confirms a few prior studies that suggest paradoxical leaders' behaviors as predictors of team creativity. Surprisingly, the hypothesis proposing a negative relationship between paradoxical leadership and negative affective tone was not supported by the findings. Instead, this study found a significant negative relationship between paradoxical leadership and negative affective tone, suggesting that paradoxical leadership diminishes negative affectivity in teams. Furthermore, this study contributes to mindfulness theory by claiming its buffering role between the negative relationship of negative affective tone and team creativity. Moreover, in this multilevel model, AET was used as an underpinning theory, which is rare in the literature. These findings provide new insights into the phenomenon of paradoxical leadership and call for further research in this area.

5.25 Practical Implications

Adapting to evolving environment places significant challenges on managers, as they must navigate complexity and drive innovation across all levels of their organizations. Paradoxical leadership offers a promising framework for fostering

innovation and creativity both at the individual and team levels. However, it can be a double-edged sword, as these leaders often emphasize contradictory demands for employees and teams. Moreover, the paradoxical behaviors exhibited by these leaders can engender ambivalence in the leader-follower relationship, a phenomenon referred to as LMX ambivalence. This ambivalence can act as a stressor and lead to detrimental consequences, including unethical pro-organizational behaviors, negative emotions, and a decline in performance. The current study suggests to managers and practitioners that taking an avoidant approach to ambivalence is not a viable solution. Instead, it highlights a more optimistic perspective. Just as every cloud has a silver lining, ambivalence can yield positive outcomes for employees, managers, and organizations.

The study findings confirm, inform, and suggest to managers that paradoxical leadership is vital for organizations to remain relevant on this competitive scene, as this form of leadership offers innovation and creativity. Paradoxes are part and parcel of the environment and include stability vs. growth, innovation vs. regulations, profit vs. sustainability, etc. Managers who have the ability and sensitivity to handle this complexity are the champions of organizations. Study findings suggest that this crucial element should be taken into consideration while devising a policy for selecting managers, supervisors, or team leaders. Furthermore, organizations should have ongoing training programs for managers to deal with paradoxical situations.

Study results also make the fact clear that paradoxical leaders employ paradoxical demands such as flexibility vs. control, distance vs. closeness, uniformity vs. individualization, etc. that have the potential to engender LMX ambivalence among followers or team members. If the employees are not capable of understanding, handling, and taking advantage of such paradoxical cues coming from the leadership, the results would be devastating. LMX ambivalence could yield negative affectivity that could compromise the whole creative process instead of strengthening it. The study recommends to managers and HR departments that, while making selection policies, this element should be taken into account to ensure that such employees are selected who have the disposition, potential, and experience to handle such paradoxes. Only in this way can they yield the dividends of LMX

ambivalence in the form of innovative behaviors. Moreover, paradoxical behaviors from employees sometimes nudge managers to act paradoxically.

The study also surfaces a very insightful finding that LMX ambivalence is a double-edged sword that has the potential to instill innovative work behaviors as well as stimulate strong negative emotions that are detrimental to creative performance. The study proposes that mindfulness can mitigate negative affectivity, and in this way, dividends of LMX ambivalence in the form of innovative behaviors could be received. Mindfulness is a trait as well as a state that enhances an individual's focus on both internal and external stimuli with present attention. It helps the individual remain impartial and objectively analyze paradoxes from the leader and environment with a present focus and conscious awareness without being judgmental. Therefore, this study provides an avenue for managers and practitioners to understand that they must have mindful individuals in their human inventory. Therefore, while making policies, managers should ensure that, during the recruitment process, individuals who are mindful may be selected. Furthermore, a bundle of training programs and trainers are available that can enhance mindfulness in employees and augment general and innovative performance. Managers and policymakers should design ongoing training programs that could inculcate mindfulness in employees. Furthermore, the study presented group-level findings and suggested that innovative performance in teams has a better impact on organizations. Findings suggest managers should have a team-level perspective, focus on developing better teams, and devise strategies to engender paradoxical perspectives in employees and managers through role modelling.

Finally, the focus of the study was software teams and their supervisors. Software houses have been expanding by and large throughout the country. According to PSEB (2022), more than 17000 registered software houses are operating in Pakistan, with more than 600,000 employees and generating 2.6 billion dollars in revenue annually. Innovation and creativity are dire needs of the IT industry because of the rapid shift in technologies and products. The IT industry has been placed at the core of all industries because radical change in this industry has revolutionized the whole business world. This has presented a huge challenge for organizations as well as for managers. Study findings suggest that to foster

paradoxical thinking and behaviors, organizations, policies, procedures, and more specifically, HR practices, need to restructure to have individuals in their inventory who can handle such complexities.

In summary, organizations should consider implementing mindfulness training programs for their employees to help them cope with negative affective experiences and enhance their ability to engage in innovative work behaviors. Additionally, organizations should encourage paradoxical leadership behaviors among their leaders and employees to promote positive relationships with their subordinates and enhance team creativity. By doing so, organizations can create a more innovative and creative work environment that supports employee growth and development.

5.26 Limitations and Future Directions

Even though the study has many methodological strengths and data was gathered from various sources such as team members and team leaders with four-time lags, some areas could be improved. For instance, if data for different variables were collected at different time lags, it is recommended that all variables be collected at all time lags so that such data can be compared to find clearer results. Moreover, the study sample comprises team members of software developers and their team leaders. For generalizability, future researchers should collect data from Pakistan's other industries, especially government institutions. The reason is that incremental innovation is part of every organization. Secondly, the effects of LMX ambivalence would be louder in government institutions where managers have extraordinary powers and control over resources.

Negative affect was theorized and used in the study's analysis, whereas positive affect was controlled to get clean results. Many studies from previous research have argued that the interplay of both affective states complements creativity. To measure dual-tuning effects, future research should test both the positive and negative affect with innovation and creativity. The study used a paradoxical leadership style, which is more specific for innovation and creativity but ignored other leadership styles such as transformational leadership, inclusive leadership, etc. These styles showed good potential to generate innovation and creativity.

Furthermore, all leadership styles carry the baggage of contradictions built into their positions. However, literature is still unaware how and to what extent other leadership behaviors would influence LMX ambivalence. Future researchers should consider different leadership styles with this dyadic ambivalence. Furthermore, because LMX ambivalence is a new concept, the literature knows little about its antecedents and consequences. Many recent scholars have noted this deficiency and called for more empirical studies in this area (see Rothman et al., 2017; Lee, Thomas, Geoff, et al., 2019). Future researchers may consider different antecedents of LMX ambivalence, such as the personality factors of the employees. In this regard, testing big five model with LMX ambivalence would be a good choice as different individuals on big five might experience different levels of dyadic ambivalence.

The current study investigated innovative work behaviors of employees as the consequence of LMX ambivalence, which is an extra-role behavior and not part of the job description. While it ignored other important behaviors, such as in-role behaviors, future research should consider in-role behaviors as outcome variables of dyadic ambivalence. In addition, the study used mindfulness as a moderator at individual and team levels, but ignored other personality and environmental factors that may also play a vital role in yielding positive outcomes from the ambivalence. For instance, from the dispositional side, creative self-efficacy or emotional intelligence may provide a good avenue for future researchers to study them with dyadic ambivalence. Further, organizational climate and support from leaders and co-workers may also help mitigate the negative impacts of ambivalence and negative affectivity.

The study also investigated the antecedents of paradoxical leadership at individual and team levels. Paradoxical leaders' behaviors can yield LMX ambivalence and innovative behaviors at individual levels. Though LMX ambivalence is a stressor, it is not recognized as a negative variable. Past researchers have emphasized the need to study the dark side of paradoxical leadership behaviors, which is ignored in the current study. Future researchers should gauge paradoxical leadership's positive and negative outcomes, such as burnout. Two findings of the study remain counterintuitive. First, paradoxical leadership was negatively related to negative

affective tone (a positive relationship was theorized). Second, Results indicated that team-level mindfulness reduces the negative relationship between paradoxical leadership and negative affective tone indicating that mindfulness enhances negative affectivity rather reducing it. Future research should be directed toward verifying these new relationships.

Another limitation of the study is the difference in effect between direct and indirect paths. The direct link between LMX ambivalence and innovative work behavior is positive, whereas the indirect link between LMX ambivalence, negative affect, and innovative work behavior is negative. This clearly indicates the need for a suppressor. Although such studies have been published in esteemed journals (see, for instance, [Tariq, Weng, Ilies, & Khan, 2021](#)), future scholars may consider self-efficacy as the mediating mechanism between LMX ambivalence and innovative work behavior as a suppressor variable.

5.27 Conclusion

In the contemporary landscape, management practitioners and scholars alike are drawn to three compelling constructs: innovation, paradoxes, and ambivalence. The present study endeavors to address gaps in all three of these realms. LMX ambivalence is a novel conceptualization within context of dyadic relationships. This dissertation proposes paradoxical leadership as a pivotal predictor, while negative affective tone, innovative work behaviors, and team creativity emerge as consequential outcomes of LMX ambivalence. Additionally, we explore the role of mindfulness as a crucial boundary condition, both at the individual and team levels, shedding light on how it modulates the dynamics within these constructs. Findings of the study suggest that innovation and creativity is the dire need of every organization at both individual and team levels. In this pursuit, paradoxical leadership emerges as a distinctive leadership style, uniquely equipped to foster innovation across all organizational strata. However, Paradoxical demands from the leader engenders paradoxical tensions within leader-follower relationships manifested as LMX ambivalence. Previous research has traditionally associated ambivalence with adverse outcomes, including negative emotions and suboptimal

performance, often prompting managers to adopt avoidance strategies. This study challenges this prevailing notion by presenting novel and insightful findings. It reveals that LMX ambivalence can yield positive outcomes in the form of enhanced innovative work behaviors and heightened team creativity, thereby promoting a more productive and dynamic working environment. Furthermore, the study highlights the potential for achieving innovation performance by mitigating negative affect through the application of mindfulness, both at the individual and team levels. This multifaceted approach empowers organizations to harness the inherent tensions and complexities of paradoxical leadership, transforming them into drivers of creativity and innovative excellence. From a theoretical standpoint, the study's findings make a significant contribution to the ambivalence literature, marking the first instance where paradoxical leadership is introduced as a predictor, while innovative work behaviors are revealed as outcomes stemming from LMX ambivalence. This expansion enriches the paradoxical leadership theory by not only positioning it as a driving force but also presenting LMX ambivalence, negative affective tone, and innovative behaviors as consequential facets of this leadership style. Moreover, this study presents a novel perspective by emphasizing the pivotal roles of paradoxical leadership and LMX ambivalence as crucial predictors of innovative work behavior and team creativity. In doing so, it offers fresh insights that can influence the way practitioners and managers approach the recruitment and training of employees. Further, by incorporating mindfulness into their strategies, practitioners and managers have the potential to steer clear of adverse performance outcomes. Instead, they can cultivate an environment that nurtures the emergence of creative, innovative, and high-performing individuals and teams, aligned with organizational goals.

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Appendix-A

Questionnaire

Dear Respondent,

My name is Gulfam Murtaza. As a Ph.D. research scholar at Capital University of Science and Technology (CUST) Islamabad, I am conducting a study on **“Impact of Paradoxical Leadership and LMX Ambivalence on Individual and Team Level Innovation and Creativity: Building Theoretical and Empirical Bridges across Levels Using Affective Event Theory.”** I request you, please fill out a survey attached to this cover letter. The survey will not take more than 15 minutes. The data collected for this study will be kept confidential and anonymous. All findings will be reported in aggregate form and only be used for academic purposes. You may contact me at gulfammurtaza@hotmail.com or +92 3335915910 for any information.

Thanks a lot for your help and support!

Sincerely,

Gulfam Murtaza

Ph.D (HRM) Research Scholar

Faculty of Management and Social Sciences

Capital University of Science and Technology Islamabad, Pakistan.

Section 1: Demographics

Gender	1- Male 2- Female
Age(years)	1 (18-25), 2 (26-30), 3 (31-40), 4 (41-45), 5 (46-above)
Qualification	1 (Intermediate), 2 (Bachelors), 3 (Masters), 4 (Doctorate)
Working (Years)	1 (Less than 5 yrs), 2 (6–10 yrs), 3 (11-15 yrs), 4 (more than 15 yrs)
No. of years working in this department	1 (Less than 1 yrs), 2 (1–2 yrs), 3 (2-3 yrs), 4 (3-4), 5 (more than 4 years)
No. of years working with the current supervisor	1 (Less than 1 yrs), 2 (1–2 yrs), 3 (2-3 yrs), 4 (3-4), 5 (more than 4 years)

Employee Questionnaire

T1

Name of the Organization: _____

Employee ID: _____

Maternal Grand Parent's Name: _____

Team/Group ID:_____

Paradoxical Leadership

How much the below given statement fits with your current or past immediate supervisor

The scale ranges from 1= Strongly Disagree, 2= Disagree, 3= Neither agree/nor disagree, 4= Agree, 5= Strongly Agree.

Sr. No	Statement					
UI.1	Uses a fair approach to treat all subordinates uniformly, but also treats them as individuals.	1	2	3	4	5
UI.2	Puts all subordinates on an equal footing, but considers their individual traits or personalities.	1	2	3	4	5

UI.3	Communicates with subordinates uniformly without discrimination, but varies his or her communication styles depending on their individual characteristics or needs.	1	2	3	4	5
UI.4	Manages subordinates uniformly, but considers their individualized needs.					
UI.5	Assigns equal workloads, but considers individual strengths and capabilities to handle different tasks.	1	2	3	4	5
SO.1	Shows a desire to lead, but allows others to share the leadership role.	1	2	3	4	5
SO.2	Likes to be the center of attention, but allows others to share the spotlight as well.	1	2	3	4	5
SO.3	Insists on getting respect, but also shows respect toward others.	1	2	3	4	5
SO.4	Has a high self-opinion, but shows awareness of personal imperfection and the value of other people.	1	2	3	4	5
SO.5	Is confident regarding personal ideas and beliefs, but acknowledges that he or she can learn from others.	1	2	3	4	5
CA.1	Controls important work issues, but allows subordinates to handle details.	1	2	3	4	5
CA.2	Makes final decisions for subordinates, but allows subordinates to control specific work processes.	1	2	3	4	5
CA.3	Makes decisions about big issues, but delegates lesser issues to subordinates.	1	2	3	4	5
CA.4	Maintains overall control, but gives subordinates appropriate autonomy.	1	2	3	4	5
RF.1	Stresses conformity in task performance, but allows for exceptions.	1	2	3	4	5
RF.2	Clarifies work requirements, but does not micromanage work.	1	2	3	4	5

RF.3	Is highly demanding regarding work performance, but is not hypercritical.	1	2	3	4	5
RF.4	Has high requirements, but allows subordinates to make mistakes.	1	2	3	4	5
DC.1	Recognizes the distinction between supervisors and subordinates, but does not act superior in the leadership role.	1	2	3	4	5
DC.2	Keeps distance from subordinates, but does not remain aloof	1	2	3	4	5
DC.3	Maintains position differences, but upholds subordinates' dignity.	1	2	3	4	5
DC.4	Maintains distance from subordinates at work, but is also amiable toward them.	1	2	3	4	5

Please rate the following statements for Team Level Mindfulness

The scale ranges from 1= Strongly Disagree, 2= Disagree, 3= Neither agree/nor disagree, 4= Agree, 5= Strongly Agree.

Sr. No	Statement					
1	It is difficult for the team to stay focused on what is happening in the present. (R)	1	2	3	4	5
2	The team rushes through activities without being really attentive to them. (R)	1	2	3	4	5
3	On the team, we listen to each other with one ear, doing something else at the same time. (R)	1	2	3	4	5
4	The team is preoccupied with the future or the past. (R)	1	2	3	4	5
5	The team does things without paying attention. (R)	1	2	3	4	5
6	The team criticizes members for having irrational or inappropriate thoughts or emotions. (R)	1	2	3	4	5

7	Some of the team's thoughts or emotions are inappropriate. (R)	1	2	3	4	5
8	The team is aware of thoughts and feelings without over-identifying with them.	1	2	3	4	5
9	This team is friendly to members when things go wrong.	1	2	3	4	5
10	The team experiences moments of peace and ease, even when things get hectic and stressful.	1	2	3	4	5

Employee Questionnaire

T2

Name of the Organization: _____

Employee ID: _____

Maternal Grand Parent's Name: _____

Team/Group ID: _____

Please rate the following statements for LMX Ambivalence

The scale ranges from 1= Strongly Disagree, 2= Disagree, 3= Neither agree/nor disagree, 4= Agree, 5= Strongly Agree.

Sr. No	Statement					
1	I have conflicting thoughts: sometimes I think that my working relationship with my manager is very good, while at other times I don't.	1	2	3	4	5
2	I have conflicting thoughts: sometimes I think my manager understands my problems and needs, while at other times I don't.	1	2	3	4	5
3	I have conflicting thoughts: sometimes I think my manager would use his/her power to help to solve problems in my work, while at other times I don't.	1	2	3	4	5
4	I have conflicting thoughts: sometimes I think I know where I stand with my manager, while at other times I don't.	1	2	3	4	5
5	I have conflicting thoughts: sometimes I think that my manager would "bail me out" at his/her expense, while at other times I don't.	1	2	3	4	5
6	I have conflicting thoughts: sometimes I think my manager recognizes my potential, while at other times I don't.	1	2	3	4	5

7	I have conflicting thoughts: sometimes I think that I would defend and justify my manager's decisions if he/she were not present to do so, while at other times I don't.	1	2	3	4	5
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Please rate the following statements indicating Individual Level Mindfulness

The scale ranges from 1= Strongly Disagree, 2= Disagree, 3= Neither agree/nor disagree, 4= Agree, 5= Strongly Agree.

Sr. No	Statement					
1	I could be experiencing some emotion and not be conscious of it until some time later.	1	2	3	4	5
2	I find it difficult to stay focused on what's happening in the present.	1	2	3	4	5
3	I tend to walk quickly to get where I'm going without paying attention to what I experience along the way.	1	2	3	4	5
4	I tend not to notice feelings of physical tension or discomfort until they really grab my attention	1	2	3	4	5
5	I forget a person's name almost as soon as I've been told it for the first time.	1	2	3	4	5
6	It seems I am "running on automatic," without much awareness of what I'm doing.	1	2	3	4	5
7	I rush through activities without being really attentive to them.	1	2	3	4	5
8	I get so focused on the goal I want to achieve that I lose touch with what I'm doing right now to get there.	1	2	3	4	5
9	I do jobs or tasks automatically, without being aware of what I'm doing.	1	2	3	4	5
10	I find myself listening to someone with one ear, doing something else at the same time.	1	2	3	4	5

11	I find myself preoccupied with the future or the past.	1	2	3	4	5
12	I find myself doing things without paying attention.	1	2	3	4	5

Employee Questionnaire

T3

Name of the Organization: _____

Employee ID: _____

Maternal Grand Parent's Name: _____

Team/Group ID: _____

This scale consist of words and phrases to describe different feelings and emotions. Please rate each of emotion on the following scale:

1= Very slightly 2= A Little 3= Moderately 4= Quite a bit 5= Extremely

How you felt when interacting with leader or situation during last month

Positive Affect	Rate each on 1-5	Negative Affect	Rate each on 1-5
Interested		Distressed	
Excited		Scared	
Strong		Hostile	
Enthusiastic		Upset	
Proud		Guilty	
Alert		Irritable	
Inspired		Ashamed	
Determined		Nervous	
Attentive		Jittery (Stressed)	
Active		Afraid	

Supervisor Questionnaire for Employee

T4

Name of the Organization: _____

Employee ID: _____

Team/Group ID: _____

Please rate each of this subordinate for Innovative Work Behavior on the extent to which he or she:

The scale ranges from 1= Strongly Disagree, 2= Disagree, 3= Neither agree/nor disagree, 4= Agree, 5= Strongly Agree.

Sr. No	Statement					
1	Searches out new technologies, processes, techniques, and/or product ideas	1	2	3	4	5
2	Generates creative ideas.	1	2	3	4	5
3	Promotes and champions ideas to others.	1	2	3	4	5
4	Investigates and secures funds needed to implement new ideas.	1	2	3	4	5
5	Develops adequate plans and schedules for the implementation of new ideas.	1	2	3	4	5
6	Is innovative.	1	2	3	4	5

Supervisor Questionnaire for Team

T4

Name of the Organization: _____

Team/Group ID:_____

Please rate each of the team for creative performance:

1= poor 2= Bad 3= Neither bad nor good 4= Good 5= Excellent

Sr. No	Statement					
1	How well does your team produce new ideas?	1	2	3	4	5
2	How useful are those ideas?	1	2	3	4	5
3	How creative do you consider your teams?	1	2	3	4	5
4	How significant are those ideas to your organizations?	1	2	3	4	5

Mplus Code for Model

TITLE: hypothesis test1

TITLE: hypothesis testing

DATA:

FILE IS "C:\Users\LENOVO\Desktop\DATA ANALYSIS2\data.csv";

VARIABLE:

NAMES ARE T_ID E_ID GEN AGE EDU GExp DExp SExp

P1-P22 TM1-TM10 L1-L7 M1-M12 PA1-PA10 N1-N10 W1-W6 TC1-TC4

PL TM LMXA IM PA NA IWB TC;

USEVARIABLES ARE T_ID P1-P22 TM1-TM10 L1-L7 M1-M12 PA1-PA10 N1-N10

W1-W6 TC1-TC4;

CLUSTER = T_ID;

BETWEEN = TC1-TC4;

MODEL:

%WITHIN%

IWBw BY W1-W6;

NAw BY N1-N10;

LMXAw BY L1-L7;

IMw BY M1-M12;

PLw BY P1-P22;

PAw BY PA1-PA10;

%BETWEEN%

TCb BY TC1-TC4;

IWBb BY W1-W6;

NAb BY N1-N10;

LMXAb BY L1-L7;

IMb BY M1* M2-M12;

IMb @1;

TMb BY TM1*TM2-TM10;

TMb @1;

PLb BY P1-P22;

PAb BY PA1-PA10;

IMLMXb | IMb XWITH LMXAb; !H12

IMNAb | IMb XWITH NAb; !h13

TMPL | TMb XWITH PLb; !H14

TMNA | TMb XWITH NAb; !H15

TCb ON NAb TMb TMNA PLb (b5 b6 b7 cd2);

NAb ON PLb TMb TMPL LMXAb IMb IMLMXb (a2 a3 a4 d1 d2 d3);

IWBb ON LMXAb NAb IMb IMNAb PLb (b1 b2 b3 b4 cd1);

LMXAb ON PLb (a1);

MODEL CONSTRAINT:

NEW(IM_L IM_M IM_H TM_L TM_M TM_H

H12_L H12_M H12_H H13_L H13_M H13_H !MODERATORS

H14_L H14_M H14_H H15_L H15_M H15_H

IMLMXb_L IMLMXB_M IMLMXb_H !MEDIATED MODERATION

IMNAb_L IMNAb_M IMNAb_H

TMPL_L TMPL_M TMPL_H

TMNA_L TMNA_M TMNA_H

!MEDIATION H9, H10, H11

PL_LMXA_IWB TOT1 LMXA_NA_IWB TOT2 PL_NA_TC TOT3

!TOTAL INDIRECT AND TOTAL EFFECTS FOR ALL RELATIONSHIPS

!at low, medium, high moderators

TINDY1_LOW1 TINDY1_LOW2 TINDY1_LOW3

TINDY1_MED1 TINDY1_MED2 TINDY1_MED3

TINDY1_HIG1 TINDY1_HIG2 TINDY1_HIG3

TOTY1_LOW1 TOTY1_LOW2 TOTY1_LOW3

TOTY1_MED1 TOTY1_MED2 TOTY1_MED3

TOTY1_HIG1 TOTY1_HIG2 TOTY1_HIG3

TINDY2_LOW1 TINDY2_LOW2 TINDY2_LOW3

```

TINDY2_MED1    TINDY2_MED2    TINDY2_MED3
TINDY2_HIG1    TINDY2_HIG2    TINDY2_HIG3

TOTY2_LOW1     TOTY2_LOW2     TOTY2_LOW3
TOTY2_MED1     TOTY2_MED2     TOTY2_MED3
TOTY2_HIG1     TOTY2_HIG2     TOTY2_HIG3);

```

```
!SLOPE TEST
```

```
IM_L = -1;
```

```
IM_M = 0;
```

```
IM_H = 1;
```

```
TM_L = -1;
```

```
TM_M = 0;
```

```
TM_H = 1;
```

```
IMLMXb_L = a1*d1*b2 + a1*d3*b2*IM_L;    !H12 mediated moderation
```

```
IMLMXb_M = a1*d1*b2 + a1*d3*b2*IM_M;
```

```
IMLMXb_H = a1*d1*b2 + a1*d3*b2*IM_H;
```

```
H12_L = d1 + d3*IM_L;                    !H12 simple moderation
```

```
H12_M = d1 + d3*IM_M;
```

```
H12_H = d1 + d3*IM_H;
```

```
IMNAb_L = a1*d1*b2 + a1*d1*b4*IM_L;    !H13 mediated moderation
```

```
IMNAb_M = a1*d1*b2 + a1*d1*b4*IM_M;
```

```
IMNAb_H = a1*d1*b2 + a1*d1*b4*IM_H;
```

```
H13_L = b2 + b4*IM_L;                    !H13 simple moderation
```

```

H13_M = b2 + b4*IM_M;
H13_H = b2 + b4*IM_H;

TMPL_L = a2*b5 + a4*b5*TM_L;           !H14 mediated moderation
TMPL_M = a2*b5 + a4*b5*TM_M;
TMPL_H = a2*b5 + a4*b5*TM_H;

H14_L = a2 + a4*TM_L;                 !H14 simple moderation
H14_M = a2 + a4*TM_M;
H14_H = a2 + a4*TM_H;

TMNA_L = a2*b5 + a2*b7*TM_L;         !H15 mediated moderation
TMNA_M = a2*b5 + a2*b7*TM_M;
TMNA_H = a2*b5 + a2*b7*TM_H;

H15_L = b5 + b7*TM_L;                 !H15 simple moderation
H15_M = b5 + b7*TM_M;
H15_H = b5 + b7*TM_H;

PL_LMXA_IWB = a1*b1;                 !H9
TOT1 = a1*b1 + cd1;

LMXA_NA_IWB = d1*b2;                 !H10
TOT2 = d1*b2 + b1;

PL_NA_TC = a2*b5;                     !H10
TOT3 = a2*b5 + cd2;

!calculating total indirect effects for IWB

TINDY1_LOW1 = a1*b1+(a2+a4*TM_L+a1*d1+a1*d3*IM_L)(b2+b4*IM_L);
TINDY1_LOW2 = a1*b1+(a2+a4*TM_L+a1*d1+a1*d3*IM_M)(b2+b4*IM_M);

```

$$\text{TINDY1_LOW3} = a1*b1+(a2+a4*TM_L+a1*d1+a1*d3*IM_H) (b2+b4*IM_H);$$

$$\text{TINDY1_MED1} = a1*b1+(a2+a4*TM_M+a1*d1+a1*d3*IM_L) (b2+b4*IM_L);$$

$$\text{TINDY1_MED2} = a1*b1+(a2+a4*TM_M+a1*d1+a1*d3*IM_M) (b2+b4*IM_M);$$

$$\text{TINDY1_MED3} = a1*b1+(a2+a4*TM_M+a1*d1+a1*d3*IM_H) (b2+b4*IM_H);$$

$$\text{TINDY1_HIG1} = a1*b1+(a2+a4*TM_H+a1*d1+a1*d3*IM_L) (b2+b4*IM_L);$$

$$\text{TINDY1_HIG2} = a1*b1+(a2+a4*TM_H+a1*d1+a1*d3*IM_M) (b2+b4*IM_M);$$

$$\text{TINDY1_HIG3} = a1*b1+(a2+a4*TM_H+a1*d1+a1*d3*IM_H) (b2+b4*IM_H);$$

!TOTAL DIRECT EFFECTS FOW IWB AT LOW, MED, HIGH MODERATOES

$$\text{TOTY1_LOW1} = \text{TINDY1_LOW1} + cd1;$$

$$\text{TOTY1_LOW2} = \text{TINDY1_LOW2} + cd1;$$

$$\text{TOTY1_LOW3} = \text{TINDY1_LOW3} + cd1;$$

$$\text{TOTY1_MED1} = \text{TINDY1_MED1} + cd1;$$

$$\text{TOTY1_MED2} = \text{TINDY1_MED2} + cd1;$$

$$\text{TOTY1_MED3} = \text{TINDY1_MED3} + cd1;$$

$$\text{TOTY1_HIG1} = \text{TINDY1_HIG1} + cd1;$$

$$\text{TOTY1_HIG2} = \text{TINDY1_HIG2} + cd1;$$

$$\text{TOTY1_HIG3} = \text{TINDY1_HIG3} + cd1;$$

!calculating total indirect effects for TC

$$\text{TINDY2_LOW1} = (a2+a4*TM_L+a1*d1+a1*d3*IM_L) (b5+b7*TM_L);$$

$$\text{TINDY2_LOW2} = (a2+a4*TM_M+a1*d1+a1*d3*IM_L) (b5+b7*TM_M);$$

$$\text{TINDY2_LOW3} = (a2+a4*TM_H+a1*d1+a1*d3*IM_L) (b5+b7*TM_H);$$

$$\text{TINDY2_MED1} = (a2+a4*TM_L+a1*d1+a1*d3*IM_M) (b5+b7*TM_L);$$

$$\text{TINDY2_MED2} = (a2+a4*TM_M+a1*d1+a1*d3*IM_M) (b5+b7*TM_M);$$

$$\text{TINDY2_MED3} = (a2+a4*TM_H+a1*d1+a1*d3*IM_M) (b5+b7*TM_H);$$

TINDY2_HIG1 = (a2+a4*TM_L+a1*d1+a1*d3*IM_H) (b5+b7*TM_L);

TINDY2_HIG2 = (a2+a4*TM_L+a1*d1+a1*d3*IM_H) (b5+b7*TM_L);

TINDY2_HIG3 = (a2+a4*TM_L+a1*d1+a1*d3*IM_H) (b5+b7*TM_L);

!TOTAL DIRECT EFFECTS FOW TC AT LOW, MED, HIGH MODERATOES

TOTY2_LOW1 = TINDY2_LOW1 + cd2;

TOTY2_LOW2 = TINDY2_LOW2 + cd2;

TOTY2_LOW3 = TINDY2_LOW3 + cd2;

TOTY2_MED1 = TINDY2_MED1 + cd2;

TOTY2_MED2 = TINDY2_MED2 + cd2;

TOTY2_MED3 = TINDY2_MED3 + cd2;

TOTY2_HIG1 = TINDY2_HIG1 + cd2;

TOTY2_HIG2 = TINDY2_HIG2 + cd2;

TOTY2_HIG3 = TINDY2_HIG3 + cd2;

ANALYSIS:

TYPE IS TWOLEVEL RANDOM;

ALGORITHM = INTEGRATION;

INTEGRATION = MONTECARLO(5000);

ESTIMATOR IS ML;

ITERATIONS = 1000;

CONVERGENCE = 0.00005;

H1ITERATIONS = 20000;

MITERATIONS = 1000;

OUTPUT: MODINDICES(10) RESIDUAL STANDARDIZED CINTERVAL TECH3 TECH4;