CAPITAL UNIVERSITY OF SCIENCE AND TECHNOLOGY, ISLAMABAD

Impact of Creative Leadership on Innovative Project Success with Mediating Role of Teamwork Quality and Moderating Role of Top Management

by

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I want to dedicate this achievement my parents, teachers and friends who always encourage and support me in every crucial time

CERTIFICATE OF APPROVAL

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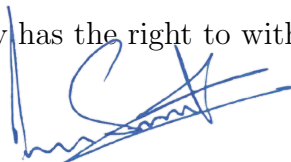
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I, **Muhammad Hassan Khan** hereby state that my MS thesis titled "**Impact of Creative Leadership on Innovative Project Success with Mediating Role of Teamwork Quality and Moderating Role of Top Management**" is my o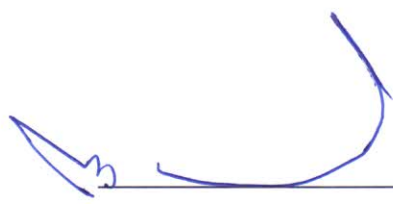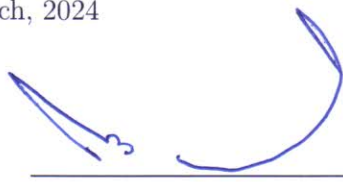wn work and has not been submitted previously by me for taking any degree from Capital University of Science and Technology, Islamabad or anywhere else in the country/abroad.

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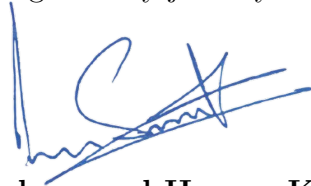
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In the name of Allah, the Most Gracious, the Most Merciful. All praise is due to God, the Cherisher and Sustainer of the worlds. I express my gratitude to Almighty Allah, the Lord of all existence, for bestowing upon me His greatest blessing — knowledge and wisdom — enabling me to successfully accomplish my task.

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(Muhammad Hassan Khan)

Abstract

This study explores the relationship between Creative Leadership, Teamwork Quality, and Top Management in the context of IT-based companies, to study the impact of these variables on Innovative Project Success. The study, based on responses from 368 participants, investigates the positive influence of Creative Leadership on Innovative Project Success and delves into the mediating role of Teamwork Quality. Additionally, the moderating role of Top Management is examined to understand how it shapes the relationship between Creative Leadership and Teamwork Quality.

The research methodology involves data collection and sampling using quantitative analysis of the IT professionals. The findings highlight a significant positive impact of Creative Leadership on Innovative Project Success, suggesting that leaders fostering a creative environment contribute to project success. Teamwork Quality emerges as a crucial mediator in this relationship, indicating that the effectiveness of teamwork plays a pivotal role in translating creative leadership into innovative project success.

Furthermore, the study underscores the importance of Top Management as a moderator, shedding light on how its influence can enhance or attenuate the relationship between Creative Leadership and Teamwork Quality. Understanding these complex dynamics is essential for projects aiming to optimize their innovation processes.

In conclusion, this research contributes valuable insights into the intricate relationships within the realms of Creative Leadership, Teamwork Quality, and Top Management, offering practical implications for IT-based companies seeking to enhance their innovative project outcomes.

Keywords: Creative Leadership, Innovative Project Success, Teamwork Quality, Top Management.

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Chapter 1

Introduction

1.1 Background of the Study

Creativity and innovation hold a significant role within the realm of business strategy for numerous project-based organizations (Senf et al., 2014; Sarris et al., 2014). As a fundamental competency, creativity empowers enterprises to sustain their competitive advantage while continually fostering innovation. Existing literature underscores that the creative capabilities of employees are the bedrock of an organization's capacity for creativity and innovation, and these are closely linked to Project Team Performance eventually leading to the business performance Amabile (1996) and Herrmann and Felfe (2014). However, it's important to note that employee creativity and innovation are not spontaneous phenomena; they require leadership that actively supports and encourages their Teamwork Quality throughout the creative process (Gumusluoğlu and Ilsev, 2009; Rousseau et al., 2014). Despite this consensus prevalent in the literature, the role of leadership as a catalyst in this ever-changing realm of businesses, we can find relatively underexplored domain for leadership creativity and innovation.

Studies in management practices have continuously underscored the paramount significance of leadership in realizing an organization's vision and mission, particularly in confronting challenges, especially in volatile periods (Chen et al., 2022; Sattayaraksa and Boon-Itt, 2012). Empirical research has consistently affirmed that

leadership ranks among the foremost determinants of project success (LeBrasseur et al., 2002).

In the rapidly evolving landscape of today's business world, organizations face the imperative of embracing dynamism and innovation as a means to secure their survival. In pursuit of sustainability and continued competitiveness, projects must emphasize creativity and innovation. The cultivation of creativity and innovation is a crucial mandate for projects, as it paves the way for enhanced efficiency and success (Slåtten and Mehmetoglu, 2015). Indeed, creativity and innovation can serve as pivotal instruments for propelling corporate expansion (Stokes et al., 2016).

This emphasizes the pivotal role of creativity and innovation in the context of business strategy for project-based organizations. They highlight the importance of creativity as a fundamental competency that enables enterprises to maintain a competitive advantage and foster innovation continuously.

Existing literature underscores the critical role of employees' creative capabilities in an organization's capacity for innovation, linking it to Project Team Performance and overall business performance. However, it is emphasized that employee creativity and innovation are not spontaneous phenomena; they require leadership actively supporting and encouraging teamwork quality throughout the creative process.

Despite the consensus in the literature about the importance of leadership in fostering creativity and innovation, the role of leadership in this ever-changing business landscape remains relatively underexplored.

The paragraphs also mention the continuous emphasis in management practices on the significant role of leadership in realizing an organization's vision and mission, particularly during challenges and volatile periods, as affirmed by empirical research linking leadership to project success.

In the rapidly evolving business world, the imperative for organizations is to embrace dynamism and innovation for survival.

Projects, in particular, are urged to prioritize creativity and innovation for sustainability and continued competitiveness. The cultivation of creativity and innovation is presented as a crucial mandate for projects, leading to enhanced efficiency

and success. The ultimate goal is to leverage creativity and innovation as pivotal instruments for propelling corporate expansion in today's dynamic business environment.

1.2 Gap Analysis

Individuals' responses to novel ideas are often marred by premature criticism, hindering constructive thinking. The prioritization of projecting practicality and cost-effectiveness accelerates this tendency, leading to swift judgment and the dismissal of potentially promising yet imperfect concepts.

Rooted in a culture of linear problem-solving, many fail to recognize the value of exploring diverse perspectives, limiting their willingness to consider alternative approaches to achieving their goals.

Significant strides have been made in understanding the influence of creative leadership on the success of innovative projects, particularly concerning its interaction with teamwork. Nevertheless, a substantial gap in research persists, warranting deeper investigation into this area.

This study responds to Yukl et al. (2009)call for research on the need for a comprehensive model explaining the influence of leadership on creativity and innovative behavior for the success of Innovative Project. As observed by Rosing et al. (2011), the intricate nature of the innovation process engenders multifaceted occurrences.

These multifaceted occurrences encompass creativity, (denoting the generation of novel and fresh ideas), and innovative behavior, signifying the implementation of these novel thoughts, as the initial and subsequent phases of the innovation process West (2012) The intricacy arises from the non-linear progression of these two stages within the innovation process, as previously suggested by researchers Anderson et al. (2004) King and Anderson (2002), VandeWalle et al. (1999).

Consequently, scholars have advocated for the development of a comprehensive model to understand the influence of leaders on creativity and innovation Mumford and Licuanan (2004).

The rationale behind advocating the critical role of leadership behavior lies in the fact that individuals often need to step outside their routine tasks to demonstrate creativity and innovation, a process that can trigger feelings of fear and anxiety Choi et al. (2015). In this context, leadership behavior assumes a pivotal role by fostering a risk-tolerant environment where employees feel confident in transcending the status quo and actively participating in the generation of novel and valuable ideas (Simmons and Sower, 2012).

The significance of leadership behavior in the implementation of innovative ideas is equally evident. Leaders who empower their subordinates through delegation and who harbor creative visions tend to be more successful in translating creative concepts into tangible innovations Jong and Hartog (2008). Nevertheless, despite a consensus on the substantial influence of leaders in catalyzing individual-level creativity and innovative behavior, the study of leadership behavior's role in driving creativity and innovation in a rapidly evolving business landscape remains an ongoing area of research and inquiry.

Creativity and innovation play an important role in success of Innovative project for many project-based organizations Senf et al. (2014); Sarris et al. (2014). Similarly, the significance of teamwork in the achievement of success in innovation projects is well-established within theoretical literature.

Widely acknowledged methodologies for fostering creativity and innovation in the context of new product development Clark (1991), Cooper and Sommer (2018), including project management (Pinto Fernandes et al. (2020), emphasize the collaborative aspect.

Moreover, the few studies that have researched into this intersection have primarily focused on specific sectors or industries, such as technology, leaving a dearth of comprehensive research spanning diverse organizational settings.

While numerous studies have examined the direct influence of creative leadership on innovative project success LeBrasseur et al. (2002); Herrmann and Felfe (2014), and several others have focused on the mediating role of teamwork in various project contexts West (1990), limited research has sought to comprehensively integrate these elements.

1.3 Problem Statement

In the ever-evolving landscape of contemporary organizations, the drive to foster innovation and achieve project success is of paramount significance. Creative leadership, marked by its emphasis on promoting a climate of ingenuity, has emerged as a critical factor in steering organizations towards innovative project success. However, understanding the intricate dynamics involved in this relationship necessitates a comprehensive exploration, including the roles of teamwork quality and top management. Creative leadership, as exemplified by its cultivation of an environment that encourages novel thinking and imaginative problem-solving, is acknowledged for its potential to propel innovative projects to fruition (Amabile, 2018).

Yet, this leadership style's direct impact, while apparent, only tells part of the story. To delve deeper into this phenomenon, one must consider the mediating influence of teamwork quality.

Teamwork quality, characterized by effective collaboration, communication, and coordinated efforts among team members, is known to be pivotal in the execution of innovative projects (Griffin and Hauser, 1992). However, the extent to which creative leadership's influence on innovative project success is channeled through the mediation of teamwork quality (Hoegl and Gemuenden, 2001) remains an area ripe for exploration. This mediation role can significantly impact the project's success rate and the way creative leadership is harnessed.

Furthermore, the role of top management within this framework is pivotal. Top management not only shapes the organizational culture but also plays a vital role in providing the necessary support and resources for innovative projects (Lee et al., 2018). The extent to which top management moderates the relationship between creative leadership and innovative project success is an avenue that merits investigation. Hence, this study seeks to bridge this gap in the existing literature by investigating the impact of creative leadership on innovative project success. More specifically, it aims to elucidate the mediation role of teamwork quality (Hoegl and Parboteeah, 2003) and the moderation role of top management within this relationship. Through an empirical analysis, the research endeavors

to provide valuable insights that can aid projects in optimizing their creative leadership practices, thereby advancing the attainment of innovative project success (Swink, 2000). In the dynamic landscape of contemporary organizations, fostering innovation and achieving project success is a crucial objective. Creative leadership, known for promoting ingenuity, has become a key factor in steering organizations toward innovative project success.

The relationship between creative leadership and project success involves intricate dynamics, necessitating a comprehensive exploration that considers the roles of teamwork quality and top management (Chemmanur et al., 2018).

Creative leadership, fostering an environment for novel thinking and problem-solving, is recognized for its potential to drive innovative projects to fruition. However, the direct impact of this leadership style only tells part of the story.

Teamwork quality, characterized by effective collaboration and communication among team members, plays a pivotal role in executing innovative projects.

The extent to which creative leadership's influence on project success is channeled through teamwork quality remains an area ripe for exploration, with potential significant impacts on project success rates.

Additionally, top management, shaping organizational culture and providing support and resources, is crucial in the context of innovative projects.

This study aims to bridge existing literature gaps by investigating the impact of creative leadership on innovative project success.

Specifically, it seeks to elucidate the mediation role of teamwork quality and the moderation role of top management in this relationship.

Through empirical analysis, the research aims to provide valuable insights to help projects optimize creative leadership practices, advancing innovative project success.

By addressing this multifaceted research question, the study contributes to knowledge regarding the complex interplay between leadership, teamwork, and top management in the context of innovative project success.

1.4 Research Questions

The aim of this study is to uncover the answers to the following questions, which serve as the focal point of the research:

The research focuses to explore the potential outcomes associated with the following research questions. Below are the questions of this study.

Q-No 1:
What kind of relationship exists between Creative Leadership and Innovative Project Success?

Q-No 2: What kind of relationship exists between Creative Leadership and Teamwork Quality?

Q-No 3:
What kind of relationship exists between Teamwork Quality and Innovative Project Success?

Q-No 4:
Does Teamwork Quality serve as a mediator between Creative Leadership and innovative Project Success?

Q-No 5:
Does Top Management act as a moderator in the relationship between Creative Leadership and Teamwork Quality?

Q-No 6:
What is the indirect influence of Creative Leadership on Innovative Project Success via Teamwork Quality, contingent upon the level of supportiveness from Top Management – both supportive and less supportive?

1.5 Research Objectives

The primary objectives of this study are as follows:

1. To assess the relation between Creative Leadership and Innovative Project Success.

2. To examine the impact of Creative Leadership on Teamwork Quality.

3. To examine the association between Teamwork Quality and Innovative Project Success.

4. To examine the mediating role of Teamwork Quality between Creative Leadership and Innovative Project Success.

5. To research the moderating influence of Top Management on the correlation between Creative Leadership and Teamwork Quality.

6. To assess the indirect influence of Creative Leadership on Innovative Project Success via Teamwork Quality, considering different levels of support from Top Management.

1.6   Significance of the Study

With this fast moving and innovative era there will always be areas for further investigating regarding the impact of creative and innovative leadership for the success of innovative projects (Hoegl and Gemuenden, 2001) and their success. Leaders can influence the creativity of their followers through various means, as highlighted in numerous studies. For example, leaders can communicate a vision that emphasizes long-term organizational goals rather than short-term objectives.

This vision guides the individual and collective efforts of their followers toward innovative work processes and outcomes (Amabile, 2018). Additionally, leaders play a crucial role in shaping organizational culture, as emphasized by researchers such as Schein (2014), Zaman et al. (2021). Considering this we shall further examine how creative leadership can impact innovative project success.

Leadership stands out as the foremost crucial component with immense significance in the business sector. Extensive research has been conducted on this aspect Cheng and Yang (2019); Gumusluoğlu and Ilsev (2009); Rosing et al. (2011); Zacher and Rosing (2015). The full implementation of creative leadership is not only an essential responsibility within project management but also a pivotal factor for the

success of innovative projects Zacher and Rosing (2015). Therefore, investigating its impact on Innovative Project Success would be a significant addition to the existing body of knowledge.

In addition, this study aims to explore the mediating role of Teamwork Quality between creative leadership and innovative project success Hoegl and Parboteeah (2003). This represents a notable endeavor to examine the mechanism through which innovative project success is achieved via creative leadership, with the involvement of Teamwork Quality.

Furthermore, this research seeks to analyze the moderating influence of Top Management on the relationship between creative leadership and teamwork quality Hoegl and Gemuenden (2001). While previous research has highlighted the importance of Top Management involvement in fostering an environment conducive to creative leadership, and vice versa Gumusluoğlu and Ilsev (2009); Rosing et al. (2011), the specific moderating role of Top Management as outlined above adds significant value to the study

In this rapidly changing and innovative era, continuous investigation into the impact of creative and innovative leadership on the success of innovative projects is essential. Leaders influence their followers' creativity through various means, such as communicating a long-term organizational vision. Shaping organizational culture is also crucial, emphasizing the importance of leadership.

This study delves into how creative leadership can impact the success of innovative projects, recognizing leadership as a vital component in the business sector.

Creative leadership plays a vital role not only in leadership but also in project management, as evidenced by research supporting its contribution to project success. This study delves into the mediating role of Teamwork Quality between creative leadership and innovative project success Hoegl and Gemuenden (2001), acknowledging the crucial role of teamwork in attaining project objectives. Furthermore, the research examines the moderating impact of Top Management on the relationship between creative leadership and teamwork quality, shedding light on the importance of top management in creating an environment conducive to creative leadership Amabile et al. (2004).

The study, focusing on innovative projects and project-based organizations, aims to contribute to the understanding of success in this context. It anticipates offering researchers a pathway to bridge the gap between the importance of innovative project success, the involvement of top management, and the enhancement of teamwork quality in project-based organizations (Ajmal and Koskinen, 2008). Ultimately, this investigation is poised to open new avenues for achieving objectives in innovative-based projects and project-centric organizations.

1.7 Supporting Theory

1.7.1 Conservation of Resources

Conservation of Resources (COR) theory, developed by Stevan E. Hobfoll, is a psychological framework that seeks to understand how individuals strive to obtain, retain, and protect resources that they value.

Resources in this context encompass a wide range of tangible and intangible assets, including but not limited to material possessions, social support, personal skills, time, energy, and psychological well-being.

The research model of this study is rooted in the Conservation of Resources (COR) theory Hobfoll (1989)At its core, COR theory revolves around the effective utilization of available resources Zhu et al. (2020). Scholars have defined these resources as elements that hold value and are essential for individuals (Zwikael (2008).

In the context of a project, resources encompass various aspects, including leadership styles, which encompass creative and innovative leadership practices Zhu et al. (2020).

The Conservation of Resources (COR) theory, pioneered by Stevan E. Hobfoll Hobfoll (1989) in 1989, is a psychosomatic structure that centers on individuals' efforts to acquire, maintain, and safeguard valuable resources. To recognize the entailing of the Resources, in this context, encompass a wide range of assets,

including tangible ones like finances and possessions, as well as intangible ones such as self-esteem, time, and social support.

The core principles of the COR theory include:

1.7.1.1 Resource Gain:

Creative leadership can be seen as a valuable resource in innovative projects. Creative leaders often possess unique skills, vision, and strategic thinking that enable them to generate novel ideas, inspire creativity among team members, and navigate complex challenges.

By fostering a culture of innovation and providing direction and support, creative leaders contribute to the acquisition of resources necessary for project success.

1.7.1.2 Resource Loss and Preservation:

In the face of challenges or setbacks, such as resource constraints, time pressures, or unexpected obstacles, the conservation of resources becomes crucial.

Effective teamwork quality serves as a buffer against resource loss by promoting collaboration, communication, and coordination among team members.

High-quality teamwork ensures efficient resource allocation, maximizes individual strengths, and minimizes conflicts or misunderstandings that can drain valuable resources.

In the light of the above points of the theory of conservation of resource theory we can further elaborate the mediation role of Teamwork Quality and the moderation role of Top management.

1.7.1.3 Mediation Role of Teamwork Quality:

Teamwork quality acts as a mediator between creative leadership and innovative project success. Creative leadership sets the stage for fostering a conducive environment for innovation, but it is through effective teamwork

quality that the potential of creative ideas is actualized into tangible project outcomes.

When teamwork quality is high, team members are better equipped to leverage their collective resources, share knowledge and expertise, and collaborate effectively towards project goals, thereby enhancing project success.

1.7.1.4 Moderation Role of Top Management:

Top management plays a crucial role in moderating the relationship between creative leadership, teamwork quality, and project success.

Effective top management provides the necessary resources, support, and organizational structure to facilitate creative leadership and foster teamwork quality.

They establish clear goals, allocate resources strategically, provide guidance and mentorship, and create a supportive organizational culture that values innovation and collaboration.

Through their leadership and strategic interventions, top management ensures that the synergy between creative leadership and teamwork quality translates into sustainable project success.

It has applications in fields like workplace stress, job performance, and the study of organizational behavior, which can then further welcome the creativity and innovation among the individuals and further play a vital role towards the success of project innovation Hobfoll (2011), Halbesleben et al. (2014).

In the context of this research, we can use the COR theory to better comprehend how the resource dynamics Liu and Fang (2006) e.g., psychological resources, social support, autonomy are influenced by creative leadership, how teamwork mediates the relationship, and how this ultimately impacts the success of innovation projects. The theory provides a framework for understanding how individuals and teams manage and leverage resources, which can be valuable for your research.

Chapter 2

Literature Review

2.1 Creative Leadership and Innovative Project Success

A creative leader empowers employees to participate in decision-making regarding their work environment. Creative leadership encourages collaborative decision-making within the group. An integral aspect of creative leadership is the recognition and utilization of employees' expertise. Creative leaders actively seek input from subordinates, orchestrate collective decision-making, and refrain from imposing their personal beliefs. They place value on their subordinates' input in significant decisions and respect diverse viewpoints (Clarke, 2009; Miao et al., 2019). Creative leadership cultivates a task environment characterized by psychological support, mutual trust, respect, assistance, and amicability. Creative leaders embrace suggestions from their subordinates, treat them fairly, proactively gather and analyze information pertaining to project changes and the external environment, and assist subordinates in problem-solving at the workplace.

Creative leadership is closely linked to the consideration of followers' needs and well-being, fostering a conducive atmosphere for positive and continuous interactions between leaders and their team members (Sankaran et al., 2019).

Supportive leaders actively engage in addressing challenging situations, maintaining transparency, honesty, and fairness in their interactions (Cheung et al., 2020, 2011; Rousseau et al., 2014). This leadership style encourages subordinates to freely

express their viewpoints. A creative leader possesses domain-specific expertise. Creative leadership plays a pivotal role in enhancing projects and employee performance by focusing on actions that ensure project adaptation, the realization of the organization's vision, and favorable employee work outcomes. Creative leaders address employee needs through transactional exchanges, primarily contingent on rewarding behavior. Creativity represents the capacity to generate novelty, whether it pertains to a concept or notion, a tangible item, a product, a procedure, a piece of art, a performance, or an interpretation thereof (Teresa M Amabile, 2004). It can also encompass the utilization of an array of diverse skills, capabilities, knowledge, perspectives, and experiences by employees to formulate fresh ideas, which can be applied to decision-making, problem-solving, and the efficient completion of assigned tasks (Cheung et al., 2011).

Creative leadership empowers employees in decision-making regarding their work environment, fostering collaborative decision-making within the group. This leadership style recognizes and utilizes employees' expertise, actively seeking input, orchestrating collective decision-making, and avoiding the imposition of personal beliefs. Value is placed on subordinates' input, respecting diverse viewpoints.

Creative leaders cultivate a task environment marked by psychological support Agarwal et al. (2021), mutual trust, respect, assistance, and amicability, embracing suggestions, treating subordinates fairly, and proactively addressing project changes and the external environment. Closely linked to followers' needs and well-being, creative leadership fosters a positive atmosphere for continuous interactions (Grass et al., 2020).

Supportive leaders engage actively in addressing challenging situations with transparency, honesty, and fairness, encouraging subordinates to freely express their viewpoints.

Possessing domain-specific expertise, a creative leader focuses on actions ensuring project adaptation, realizing the organization's vision, and promoting favorable employee outcomes.

This leadership style addresses employee needs through transactional exchanges contingent on rewarding behavior.

Creativity, as the capacity to generate novelty, spans concepts, tangible items, products, procedures, art, performances, or interpretations. It involves the utilization of diverse skills, capabilities, knowledge, perspectives, and experiences by employees to formulate fresh ideas applicable to decision-making, problem-solving, and efficient task completion Tjosvold (1989).

Project creativity encapsulates the principles, concepts, and insights associated with the transformation, configuration, and dynamics of an organization resulting from the exploration of creativity in a work environment. Creativity, in essence, embodies the ability and potential to engender original concepts, while innovation involves the application of these very idea Amabile (1996). In this context, creative leadership exhibits similarities with innovative leadership Akgün (2020); Jong and Hartog (2010). The word creative and innovative are also used interchangeably and thus,

Building upon the above discussion we have hypothesized that;

Hypothesis 1: Creative leadership positively influences Innovation Project Success.

2.2 The Mediating Role of Teamwork Quality

TWQ serves as a metric to gauge the Caliber of teamwork within a group and encompasses six facets: communication, coordination, balance in member contributions, mutual support, effort, and cohesion.

Elaborating on the TWQ construct discussed earlier, we will now provide the theoretical foundation and empirical substantiation for the suggested positive correlation between TWQ and project success, considering each individual facet of TWQ.

The success of innovative projects is heavily influenced by effective communication, as highlighted in existing literature. Studies, such as the one by Katz and Kahn (1978) on R&D teams, emphasize a positive correlation between within-team communication and project success. Hauptman and Hirji (1996) find that frequent two-way communication within cross-functional project teams positively influences

performance. In a German study by Hoegl and Gemuenden (2001), communication and information flow are identified as essential for project success.

Coordination is crucial for successful innovation, with teams serving as a mechanism to efficiently combine diverse skills. Singh et al. (2021) study on high-tech companies in the U.S. supports the perspective that highly integrated companies use teams for new product development.

Maintaining a balance in member contributions is imperative for project success. Seers (1989) empirical study demonstrates a significant relationship between balanced contributions and both task performance and team-member satisfaction.

It is crucial to maintain a balance in member contributions for project success. An empirical study by Seers (1989) demonstrates a significant relationship between balanced contributions and both task performance and team-member satisfaction.

Mutual support among team members, prioritizing cooperation over competition, positively impacts team performance. Tjosvold (1989) emphasizes the importance of working together for a common goal. Cooke and Szumal (1994) study indicates that constructive behaviors enhance the quality and acceptance of solutions.

The level of effort exerted by team members on their shared task significantly influences project success. Hackman (1987) suggests that effort, alongside factors like task planning and coordination, plays a notable role in team performance. Weingart's (1992) data involving 56 student groups supports this notion.

Hoegl and Gemuenden (2001) Teamwork Quality (TWQ) serves as metric for assessing the caliber of teamwork within a group, encompassing communication, coordination, balance in member contributions, mutual support, effort, and cohesion. Each facet of TWQ contributes to the suggested positive correlation between TWQ and project success.

Effective communication is crucial for the success of innovative projects, supported by literature such as Katz and Kahn (1978) study on R&D teams Hauptman and Hirji (1996) findings on cross-functional project teams. Coordination is identified as crucial for innovation, with Potnuru et al. (2019) study supporting the use of teams in highly integrated companies for new product development.

Maintaining a balance in member contributions is imperative, as demonstrated by Seers (1989) empirical study. Mutual support among team members positively impacts team performance, with Tjosvold (1989) emphasizing the importance of cooperation over competition, and Cooke and Szumal (1994) study indicating that constructive behaviors enhance solution quality and acceptance.

The level of effort exerted by team members significantly influences project success, supported by Erdheim (2007) suggestion and Weingartz et al. (2008) data involving 56 student groups. While the influence of team cohesion on performance is not unequivocal, recent reviews and studies suggest a positive relationship, as seen in Mullen and Copper (1994) findings on commitment to the task and Gully et al. (1995) meta-analysis highlighting cohesion's impact on performance, especially in tasks requiring coordination and communication, such as innovative projects. These findings underscore the multifaceted nature of team dynamics in fostering successful innovation.

While the influence of team cohesion on performance is not unequivocal, recent reviews and studies suggest a positive relationship. Klein et al. (2009) find that commitment to the task significantly impacts team performance.

Gully et al. (1995) Meta-analysis concludes that cohesion influences performance, especially in tasks requiring coordination and communication, such as innovative projects.

These findings highlight the multifaceted nature of team dynamics in fostering successful innovation.

The theoretical considerations and the evidence presented based on the six facets of TWQ lead to

Hypothesis 2a: Creative Leadership Positively Effect Teamwork quality.

Hypothesis 2b: Teamwork Quality influences positively on Innovative Project Success.

Hypothesis 2c: The relationship between Creative Leadership and Innovative Project Success is mediated by Teamwork Quality.

2.3   The Moderating Role of Top Management

In the dynamics of projects, the support of top management is indispensable. Comprising key decision-makers such as the chief executive officer, chief operating officer, chief financial officer, business unit heads, and vice presidents Lee et al. (2018), top management occupies a pivotal position within a project.

As critical stakeholders in project endeavors, top management plays a central role in project design and offers essential support to project managers, thus ensuring the successful execution of projects Creasy and Anantatmula (2013). According to Young and Poon (2013), top management stands as a critical success factor for projects.

Aligned with the Conservation of Resource Theory Young and Poon (2013) the support of top management can be likened to resource pathways within the leaders' working environment, facilitating the efficient utilization and development of project resources. By addressing the leaders' needs for esteem, goals, budget decisions, and the allocation of human, material, and technical resources Young and Poon (2013), the support of top management can enhance leaders' comfort within the project Young and Poon (2013). The support of the top management influences projects in various ways, including the selection of project managers, cultivation of a supportive culture, allocation of project resources, strategic planning, and implementation of project procedures Young and Poon (2013). They engage with project managers and team members to address various project-related issues Young and Poon (2013).

Furthermore, the top management support plays a significant role in fostering teamwork quality, thereby influencing the success of creative leadership and innovative projects Lee et al. (2018). Activities undertaken by top management, such as sharing the project's vision, communicating policies, and promoting teamwork quality, closely intersect with the role of project managers Boonstra (2013). Therefore, we posit that a leader's humility alone may not suffice for team building or project success unless complemented by top management's support. Top management delegates authority to project managers and values their feedback, creating a synergistic work environment that allows team members to enhance

their creativity Slevin and Pinto (NA). Such collaborative practices contribute to improved performance for both project managers and team members, fostering teamwork quality Owens et al. (2013), which is an indispensable element for project achievement.

Moreover, it is primarily the responsibility of top management to design the organizational culture with a focus on enhancing teamwork Hoegl and Gemuenden (2001) through promotion and support for team-based collaboration. This aligns with prior research, indicating that senior management actively removes barriers to enhance the effectiveness of teamwork quality and expedite project delivery Baiden et al. (2006). Top management is instrumental in creating an environment that stimulates learning and innovation Anderson et al. (2004).

Their encouragement is centered on enhancing the efficiency of team members, equipping them with innovative skills, identifying growth opportunities, and offering innovative solutions to workplace challenges. This, in turn, enables organizations to thrive in a competitive business landscape Jong and Hartog (2010).

In alignment with our arguments, it has been observed that senior management support positively influences teamwork quality. This support facilitates the smooth resolution of any obstacles in the development process, swiftly addresses internal delays, and propels projects towards successful completion.

Building on the above-mentioned discussion, we formulated the following hypothesis:

Hypothesis 3a: Top Management's supportiveness will moderate the relation between Creative Leadership and Teamwork Quality, resulting in a stronger relationship when Top Management exhibits stronger support.

Hypothesis 3b: The indirect influence of Creative Leadership on Innovative Project Success through Teamwork Quality is anticipated to be stronger in the presence of more supportive Top Management and weaker when Top Management is less supportive.
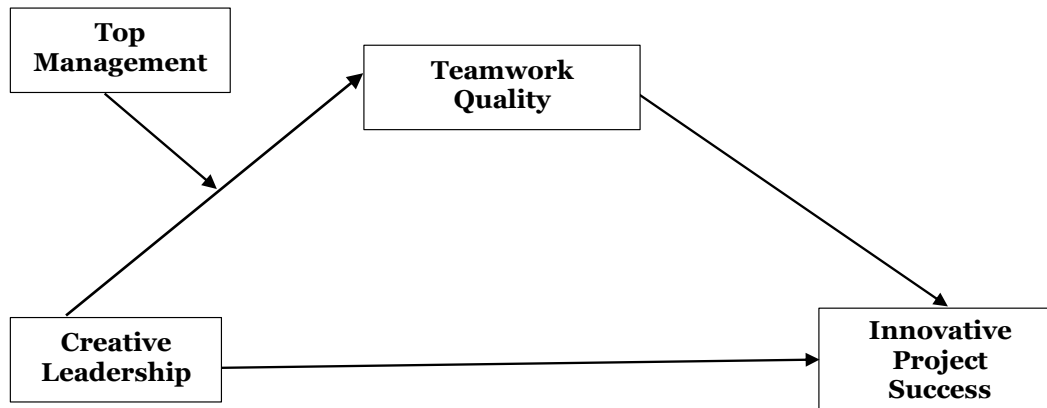
FIGURE 2.1: Research Model: The influence of creative leadership on the success of innovative projects, mediated by teamwork quality and moderated by top management.

2.4 Research Model

2.5 Summary of Hypothesis

H1: Creative Leadership influences positively Innovative Project Success.

H2a: Creative Leadership influences positively Teamwork Quality.

H2b: Teamwork Quality positively related to Innovative Project Success.

H2c: Teamwork Quality mediates the relationship between Creative Leadership and Innovative Project Success.

H3a: Top Management's supportiveness will moderate the relation between Creative Leadership and Teamwork Quality, resulting in a stronger relationship when Top Management exhibits stronger support.

H3b: The indirect influence of Creative Leadership on Innovative Project Success through Teamwork Quality is anticipated to be stronger in the presence of more supportive Top Management and weaker when Top Management is less supportive.

Chapter 3

Research Methodology

3.1 Research Design

3.1.1 Type of the Study

This research focuses on examining the causal relationships among its variables and investigates the impacts of these variables on each other. Therefore, the study falls into the category of a causal study. Additionally, the emphasis on quantitative analysis techniques.

3.1.2 Research Strategy

In this study, the survey research strategy, a widely recognized approach West (1990), is utilized for data collection by administering surveys to participants. A questionnaire has been designed and disseminated to collect data on the variables under examination.

3.1.3 Extent of Researcher Interference

This study minimizes researcher interference. The researcher refrains from actively promoting creativity, engaging employees, or cultivating a robust organizational culture within any specific project. Consequently, it can be asserted that none of the variables is manipulated by the scholar.

3.1.4   Study Setting

This study adopts a non-contrived setting, prioritizing a field analysis approach rather than experimentation. The primary objective is field study, and no experimental manipulations are involved in the investigation.

3.1.5   Unit of Analysis

The unit of analysis for this study is the individual, with a specific focus on individuals employed in project-based organizations. Responses are gathered in such a way that each response pertains to a single individual.

3.1.6   Time Horizon

This research adopts a cross-sectional data collection approach. Data is collected from respondents at a single point in time, with no repeated measurements for any variables over the study period.

3.2   Population and Sample

3.2.1   Population

The study targets employees within project-based organizations, particularly those involved in managing various large or small projects. Consequently, the staff serving in organizations dealing with diverse projects form the population under examination in this research.

3.2.2   Sampling Technique

Given the focus on individuals associated with different projects or engaged in project management roles, a convenient sampling technique is employed.

This method is chosen for its simplicity and ease in acquiring relevant data for the research.

3.2.3   Data Collection Method

Information is gathered from project-based organizations spanning multiple IT based and BPOs, operating within Pakistan. The primary tool for data collection is a questionnaire, accompanied by a cover letter explaining its purpose.

The questionnaire is administered online using Gmail and Whatsapp, Google Forms, with the survey link distributed to participants. Furthermore, additional respondents are reached through personal networks, leveraging connections such as friends and family.

3.2.4   Research Ethics

Reposition and rephrase this

The questionnaire commences with an introduction, emphasizing respondent anonymity, voluntary participation, and the confidentiality of their data and responses.

3.2.5   Sample Size

Out of the 425 individuals employed in the IT industry, the questionnaire was distributed to collect responses. Among them, 392 individuals responded. However, after screening for usability, a final sample size of 368 responses was determined, representing an 86.58% response rate.

3.3   Sample Characteristics

Various demographic variables, including gender, age, marital status, and experience, are utilized to categorize the respondents and ensure the sample's representativeness.

3.3.1 Gender

Table 3.1 displays the gender distribution of respondents, revealing that the majority of the total population is male, comprising 70.92% of respondents. Conversely, female respondents account for 29.08% of the sample.

TABLE 3.1: Frequency by Gender

Gender	Frequency	Percentage
Male	261	70.92%
Female	107	29.08%
Total	368	100%

3.3.2 Age

Various age ranges have been included to capture information about the age distribution of respondents. This approach allows respondents to easily provide details about their age, considering that they may not always feel comfortable sharing their exact age. Offering ranges helps maintain respondent privacy. The results reveal that 27.99% of respondents are aged 20-30 years, 34.51% belong to the 31-40 years age group, 24.46% fall within the 41-50 years age range, and 13.04% of the selected population is aged 51 and above.

Assuming four age groups: 20-30, 31-40, 41-50, 51 and above

3.3.3 Marital Status

Marital status, a significant demographic variable influencing behavior and responses, is examined in the findings. The results show that 39.47% of respondents are single, while 60.53% are married. The predominance of married respondents suggests that, upon attaining suitable employment, many individuals choose to enter marriage. This trend aligns with the notion that securing jobs in organizations often leads to marriage.

Categorized into two groups: Single and Married.

TABLE 3.2: Frequency by Age Group

Age Group	Frequency	Percentage
20-30	103	27.99%
31-40	127	34.51%
41-50	90	24.46%
51 and above	48	13.04%
Total	368	100%

TABLE 3.3: Frequency by Marital Status

Marital Status	Frequency	Percentage
Single	144	39.13%
Married	224	60.08%
Total	368	100%

3.3.4 Experience

Table 3.4 below presents the breakdown of respondents' experience levels. Among them, 32.34% have 0-5 years of experience, while 38.86% have 6-10 years of experience. Additionally, respondents with over 10 years of experience account for 28.80%.

Categorized into three groups: Less than 5 years, 6-10 years, More than 10 years.

TABLE 3.4: Frequency by Experience

Experience	Frequency	Percentage
Less than 5 years	119	32.34%
6-10 years	143	38.86%
More than 10 years	106	28.80%
Total	368	100.00%

3.4 Measures

The measurement of all variables utilizes a 5-point Likert scale, where a score of 5 indicates high agreement and 1 indicates low agreement. The survey is conducted in English to ensure ease of response for the participants.

3.4.1 Creative Leadership

Following the guidelines outlined in Gumusluoğlu and Ilsev (2009), a 10-item questionnaire will be utilized to assess Creative Leadership. Responses will be recorded on a 5-point Likert Scale, ranging from "strongly agree" (5) to "strongly disagree" (1). One of the items on the scale measures the perception that "Our leadership positively influences the overall creativity and innovation within the project.

3.4.2 Teamwork Quality

For the assessment of Teamwork Quality, a 7-item questionnaire will be employed, based on the framework proposed by Klein et al. (2009). Responses will be recorded using a 5-point Likert scale, ranging from "strongly agree" (5) to "strongly disagree" (1). One of the items on the scale evaluates the extent to which "Our team members are committed to achieving common goals."

3.4.3 Innovative Project Success

We have selected an 11-item questionnaire for evaluating Innovative Project Success, developed by (Citation 1). Responses will be captured using a 5-point Likert scale, ranging from "strongly agree" (5) to "strongly disagree" (1). One of the items in the scale assesses whether "Generally, customers of our projects are satisfied with the outcome." Additionally, the Cronbach's alpha coefficient for this questionnaire is calculated to be 0.94.

3.4.4 Top Management

We have opted to utilize a 6-item questionnaire on top management, initially developed by Islam et al. (2009). Respondents will indicate their responses using a 5-point Likert Scale, where 5 corresponds to "strongly agree" and 1 corresponds to "strongly disagree". This questionnaire specifically addresses construction-related aspects.

One of the items on the scale assesses whether "Top management identified the implementation of the project as a critical priority." Additionally, the Cronbach's alpha coefficient for this questionnaire, focusing on Top Management, is determined to be 0.92.

3.5 Statistical Tools

Statistical Package for Social Sciences (SPSS) version 26 is utilized to explore the relationships between variables, facilitating the execution of correlation and regression analyses. The data, collected through Google Form in the form of an Excel sheet, is imported into SPSS, and each respondent's data is incorporated for subsequent analysis.

SPSS performs various descriptive statistical analyses on the provided data, including calculating Cronbach's alpha for each variable, computing means for every variable, presenting results for control variables, detailing sample characteristics, and conducting other essential calculations crucial for survey result analysis.

Furthermore, the Hayes process is employed for regression analysis in this research. For confirmatory factor analysis, AMOS 23 is utilized as a dedicated tool.

3.6 Reliability Analysis of Scales Used

In any study, the reliability of the scale used is crucial, indicating the stability or consistency of the calculated values. While reliability may not be a primary concern for tangible aspects, it becomes essential when analyzing abstract facets.

This study conducts a reliability analysis of the scales employed, aiming to examine the interconnection between scale items.

To assess reliability, Cronbach's alpha is utilized, with values ranging from 0 to 1, where higher values indicate greater reliability. Examination of Cronbach's alpha values for each variable indicates that they all exceed 0.70 (refer to Table 3.6). Specifically, the values for creative leadership, Teamwork Quality, innovative project success, and Top Management are 0.95, 0.87, 0.94, and 0.92, respectively.

Moreover, the reliability values for the mediator, dependent, and moderator scales also surpass 0.70, indicating that all scales utilized in the study are reliable, meeting the required level of reliability. Consequently, when computing means, all items from each scale are considered.

TABLE 3.5: Scale Reliabilities

Variable	Cronbach's alpha
Creative Leadership	0.95
Teamwork Quality	0.87
Innovative Project Success	0.94
Top Management	0.92

Chapter 4

Results

4.1 Descriptive Statistics

The statistical analysis tools used for the descriptive statistics section presents for variables mean values derived from such as Creative Leadership, Teamwork Quality, Innovative Project Success, and Top Management, computed using SPSS. Higher mean values indicate consensus among respondents regarding the considered items, while lower values indicate disagreement.

TABLE 4.1: Descriptive Statistics

Variable	Sample	Min	Max	Mean	S.D
Creative Leadership	368	1	5	3.19	0.97
Teamwork Quality	368	1	5	3.25	0.87
Innovative Project Success	368	1	5	3.25	0.94
Top Management	368	1	5	3.07	0.92

Table 4.1 displays the results of the statistical analysis, showing that Creative Leadership has a mean value of 3.19, Teamwork Quality has a mean value of 3.25, Innovative Project Success has a mean value of 3.25, and Top Management has a mean value of 3.07. Based on these calculations, it can be inferred that respondents lean towards agreement for all variables, as all values surpass the minimum acceptable values.

4.2 Factor Analysis

Two types of factor analysis, namely Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA), are integrated into this study.

4.2.1 Exploratory Factor Analysis

This study employs both Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) to assess the internal consistency of the adapted scale. EFA is conducted using SPSS 26 to evaluate the internal consistency of the scale. Since the scale for the moderating variable, Top Management, was adapted by excluding three items related to Creative Leadership, EFA is deemed essential. The EFA utilizes maximum likelihood analysis with Promax rotation, setting the minimum factor loading criterion at 0.40 and the communality at 0.40.

The significance of the correlation is assessed through Bartlett's Test of Sphericity, which determines whether some components of the correlation matrix are significantly correlated. The results of this test are significant ($\chi2$=10870.777, p=0.000), indicating its suitability for factor analysis. The Kaiser-Meyer-Olkin measure of sampling adequacy, evaluating the data's effectiveness for factor analysis, yields a value of 0.963. A value greater than 0.800 is considered suitable for factor analysis, affirming the adequacy of the data. The factor solution reveals four factors responsible for 60.880% of the variations.

In the initial EFA, every item significantly loads onto its respective dimensions, and no item deviates to another factor. Therefore, there is no need to repeat EFA, and all items proceed to subsequent analysis without removal.

Table 4.2 presents factor loadings, depicting four factors. Factor 1 encompasses sixteen items of Creative Leadership (CL) from CL1 to CL10. Factor 2 consists of eleven items representing Innovative Project Success (IPS) denoted as IPS1 to IPS11. Factor 3 includes six items, TM1 to TM6, reflecting Top Management, a measure of Top Management. Finally, Factor 4 encompasses five items, TQ1 to TQ5, signifying Teamwork Quality, an indicator of Teamwork Quality.

Table 4.2: Factors

	Creative Leadership	
	Items	**1**
1.	The leaders in my organization encourage and support creative thinking and innovative ideas.	0.784
2.	Our leadership fosters an environment where employees feel comfortable sharing new ideas.	0.829
3.	The leadership of our organization actively involve employees in decision-making processes.	0.724
4.	The leadership in my organization values and recognizes innovative contributions from employees.	0.728
5.	Our leadership positively influences the overall creativity and innovation within the organization.	0.679
6.	My leaders inspire and motivate employees to think creatively and come up with innovative solutions.	0.767
7.	The leaders in my organization are open to experimenting With new approaches and taking calculated risks.	0.653
8.	The leadership in my organization provides resources and support for employees to pursue creative projects.	0.784
9.	Our leaders are accessible and approachable, making it easy for employees to discuss their ideas with them.	0.762
10.	The leadership in my organization encourages continuous learning and development to enhance creative thinking.	0.789
	Teamwork Quality	
	Items	**2**
1.	Our team members of our organization communicate effectively with each other.	0.784
2.	Our team members trust and support each other.	0.829
3.	Our team members are committed to achieving common goals.	0.724
4.	Our team members are open to different perspectives and ideas.	0.728

5.	Our team members effectively solve problems and make decisions together.	0.679
6.	Our team members feel a sense of belonging to the team.	0.767
7.	Our team members are satisfied with the overall quality of teamwork in this group.	0.779
8.	Our team members believe that the quality of teamwork positively affects the team's performance.	0.727

Innovative Project Success

	Items	3
1	Our projects typically meet their time objectives.	0.797
2	We generally excel in delivering projects within budget.	0.784
3	Our projects often yield tangible benefits for the organization.	0.793
4	Satisfaction among our project customers is typically high with the outcome.	0.803
5	Project specifications are typically fulfilled by the handover deadline.	0.728
6	Our key employees typically express contentment with our project management approach.	0.713
7	Project team members usually express satisfaction with their project involvement.	0.728
8	Intangible benefits from our projects are frequently identified.	0.742
9	End users are typically satisfied with the outcomes of our projects.	0.742
10	Our project management process is usually effective.	0.815
11	In summary, our project success rate is generally high.	0.761

Top Management

	Items	4
1.	Sufficient incentives were provided by top management.	0.876

2.	The project is viewed as a strategic activity by Top Management.	0.831
3.	There was sufficient commitment to the implementation of the project.	0.724
4.	Sufficient resources were provided for the implementation of the project.	0.815
5.	The general manager of the division actively supported the project.	0.762
6.	Top management identified the implementation of the project as a critical priority.	0.775

4.2.2 Confirmatory Factor Analysis (CFA)

AMOS 23 is employed for the confirmatory factor analysis.

The initial values, as depicted in Table 4.3, are considered suitable, negating the necessity for adjustments. With satisfactory initial values, the complexity of the analysis decreases, making the subsequent analysis more straightforward.

TABLE 4.3: Confirmatory Factor Analysis

Model	CMIN/DF	RMESA	CFI	TLI	IFI
Initial model	0.931	0.04	0.945	0.942	0.946

4.2.3 Measurement Model

Before proceeding to test the hypotheses, Confirmatory Factor Analysis (CFA) is conducted to validate the measurement model, as recommended by Gerbing & Anderson (1988). The model encompasses four variables: Creative Leadership, Teamwork Quality, Innovative Project Success, and Top Management. If the analysis results meet the required standard values, it indicates that the model is well-fitted.

In this analysis, key parameters such as the Comparative Fit Index (CFI), Incremental Fit Index (IFI), Root Mean Square of Approximation (RMSEA), and Tucker-Lewis Index (TLI) are assessed for fit values. The analysis is conducted with initial values, and no modifications are deemed necessary as all initial values fall within their respective boundaries.

The results reveal that the CFI, TLI, and IFI values exceed 0.9, indicating good fit. Specifically, the CFI, TLI, and IFI values are 0.945, 0.942, and 0.946, respectively.

Furthermore, the RMSEA value of approximately 0.04 for the model considered in this study is below the standard value for root mean square (0.05), suggesting a well-fitted model.

Figure 4.1 further confirms the excellent fit of the four-factor model.

4.3 Control Variables

To assess the influence of demographic variables on both Teamwork Quality (acting as a mediator) and Innovative Project Success (the dependent variable), a one-way ANOVA test is conducted as part of controlling variables. This aims to determine if demographic factors introduce variation, necessitating their inclusion in regression analysis.

The outcomes of the one-way ANOVA, presented in Table 4.4, indicate no significant difference in the level of Teamwork Quality among respondents based on gender (F=0.91, p=0.21), age (F=0.72, p=0.55), marital status (F=0.14, p=0.71), and experience (F=0.58, p=0.62). Therefore, no demographic factor will be controlled in the regression analysis of Teamwork Quality.

Similarly, for Innovative Project Success, the one-way ANOVA results reveal no significant difference among respondents based on gender (F=0.37, p=0.53) and age (F=0.31, p=0.83). Consequently, gender and age will not be controlled in the regression analysis of Innovative Project Success.

Furthermore, no significant difference in Innovative Project Success is found based on marital status (F=0.25, p=0.62) and experience (F=0.34, p=0.77). Therefore,

marital status and experience will also not be controlled in the regression analysis of Innovative Project Success.

The lack of significance in demographic variables and the results from Table 4.4 confirm that none of these variables will be controlled in this study.

TABLE 4.4: One way ANOVA

	Teamwork Quality		Innovative Project Success	
	F	**P**	**F**	**P**
Gender	0.91	0.21	0.37	0.53
Age	0.72	0.55	0.31	0.83
Marital Status	0.14	0.71	0.25	0.62
Experience	0.58	0.62	0.34	0.77

4.4 Correlation Analysis

The Pearson correlation analysis is employed to explore associations among variables and their nature, whether positive or negative. The sign of the correlation coefficient indicates the nature of the correlation: positive if the sign is positive and negative if the sign is negative. Furthermore, the analysis reveals the strength of the association, categorized as weak or strong. A coefficient value between 0.1 and 0.2 is considered weak, while a value from 0.3 to 0.5 is deemed a good correlation. Values exceeding 0.3 indicate a higher correlation among variables.

Reviewing Table 4.5, it becomes evident that Creative Leadership shows a significant positive relationship with Innovative Project Success (r=0.50, p=0.00). Similarly, Creative Leadership demonstrates a significant positive relationship with Teamwork Quality (r=0.57, p=0.00), and Teamwork Quality also displays a significant positive relationship with Innovative Project Success (r=0.53, p=0.00). Additionally, Creative Leadership exhibits a significant positive relationship with Top Management (r=0.54, p=0.00), and Top Management is significantly and positively correlated with Teamwork Quality (r=0.56, p=0.00) and Innovative Project Success (r=0.54, p=0.00).

TABLE 4.5: Correlation Analysis

Variable	1	2	3	4
Creative Leadership	1			
Teamwork Quality	0.57**	1		
Innovative Project Success	0.51**	0.53**	1	
Top Management	0.50**	0.56**	0.54**	1

N=368

4.5 Regression Analysis

The correlation analysis has shed light on the relationships among Creative Leadership, Teamwork Quality, Innovative Project Success, and Top Management. It primarily unveils the degree of association among these variables, while regression analysis is employed to elucidate the causal relationships between them. For this purpose, the process macro by Andrew F. Hayes is utilized in this study.

Within the regression analysis, the primary hypothesis focuses on the direct effect of Creative Leadership on Innovative Project Success. Additionally, two more direct-effect relationships pertaining to the mediating variable are hypothesized: the direct effect of Creative Leadership on Teamwork Quality and the direct effect of Teamwork Quality on Innovative Project Success. Both these relationships undergo scrutiny in the regression analysis.

Given that there is only one mediating variable in this study, the mediating relationship is also examined. Therefore, the study scrutinizes the mediating role of Teamwork Quality between Creative Leadership and Innovative Project Success to determine its significance.

Furthermore, the study analyzes the moderating effect of Top Management on the relationship between Creative Leadership and Teamwork Quality. Finally, it assesses the indirect effect of Creative Leadership on Innovative Project Success to ascertain whether this relationship is moderated by Top Management. The statistical details for each hypothesis are outlined in Table 4.6, accompanied by the rationale for each hypothesis, aiding in determining whether it is supported or not.

Hypothesis 1: That Creative Leadership will have a significant positive impact on Innovative Project Success.

From Table 4.6, it is evident that there is a significant 38% variation in Innovative Project Success due to Creative Leadership. Moreover, the positive sign with a p-value less than 0.05 indicates a significant positive impact of Creative Leadership.

TABLE 4.6: Regression Analysis

Hypothesis	β	R^2	p	LLCI	ULCI
Direct effect					
H1. CL→IPS H2a.	0.23	0.39	0.00	0.17	0.33
CL→TWQ H3b.	0.51	0.37	0.00	0.42	0.62
TWQ→IPS Indirect effect	0.47	0.34	0.00	0.41	0.57
H2c. CL→TWQ→IPS	0.27	0.33		0.19	0.31
Moderating effect H3a					
CL*TM→TWQ	0.13	0.43	0.00	0.03	0.16

N=368, CL=Creative Leadership, IPS=Innovative Project Success, TWQ=Teamwork Quality TM=Top Management LLCI=Lower Limit Confidence Interval, ULCI= Upper Limit Con?dence Interval.

Hypothesis 1 is supported by the findings, as Creative Leadership demonstrates a significant positive impact on Innovative Project Success (β =.23, p=.00).

Hypotheses 2a, 2b, 2c, and 3a are examined and supported through regression analysis and graphical representations.

Hypothesis 2a proposes that Creative Leadership positively influences Teamwork Quality. The regression analysis indicates a significant positive impact of Creative Leadership on Teamwork Quality (β=.51, p=.00), supporting this hypothesis.

Regarding Hypothesis 2b, which suggests that Teamwork Quality positively affects Innovative Project Success, the regression analysis demonstrates a significant positive relationship between Teamwork Quality and Innovative Project Success (β=.47, p=.00), thus supporting the hypothesis.

Hypothesis 2c posits that Teamwork Quality mediates the relationship between Creative Leadership and Innovative Project Success. The results of the regression

analysis support this hypothesis, indicating a significant indirect effect of Creative Leadership on Innovative Project Success through Teamwork Quality (β=.27, LLCI=.19, ULCI=.31).

Moving on to Hypothesis 3a, which explores the moderating role of Top Management in the relationship between Creative Leadership and Teamwork Quality, the regression analysis reveals a significant interaction effect (β=0.13, p=.00). Additionally, Figure 4.2 visually supports this hypothesis, showing that the positive association between Creative Leadership and Teamwork Quality is stronger when Top Management support is high.

Overall, these findings provide empirical support for all four hypotheses, indicating significant relationships between Creative Lead
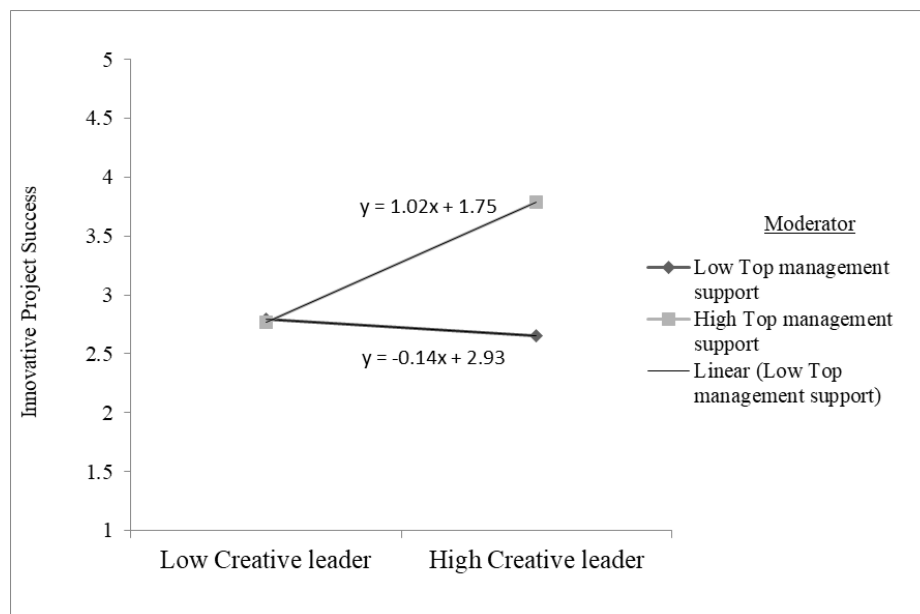
FIGURE 4.1: Moderating Role of Top Management (TM) between Creative Leadership (CL) and Teamwork Quality

4.5.1 Moderated Mediation

Hypothesis 3b posits that the indirect impact of Creative Leadership on Innovative Project Success through Teamwork Quality is expected to be more pronounced with a more supportive Top Management and diminished with less supportive Top Management.

The moderated mediation model considers Top Management as the moderator influencing the interaction between Creative Leadership and Innovative Project Success, while also incorporating Teamwork Quality as the mediating variable. The statistical outcomes for the indirect effects of Creative Leadership on Innovative Project Success through Teamwork Quality, moderated by Top Management, are presented in Table 4.7.

At low Top Management support, the indirect effect is 0.13, while at average Top Management support, it increases to 0.20, and at high Top Management support, it further rises to 0.24. The values of the indirect effect at both high and low levels of Top Management support are reported in Table 4.7.

Notably, at all three levels of Top Management support—low (LLCI= 0.05, ULCI= 0.18), average, and high (LLCI= 0.18, ULCI= 0.35)—both LLCI and ULCI contain positive signs, indicating significance at all three levels.

It is also observed that at low Top Management support, the indirect effect of Creative Leadership on Innovative Project Success through Teamwork Quality is weaker compared to the indirect effect at high Top Management support. Therefore, it can be concluded that this effect strengthens with an increase in Top Management support.

The index of moderated mediation is essential for investigating whether the indirect effect significantly changes with the change in the moderator. As the index of moderated mediation (index=.03, LLCI=.01, ULCI=.09) also does not include zero between LLCI and ULCI, it suggests the existence of moderated mediation. This indicates that the indirect effect of Creative Leadership on Innovative Project Success through Teamwork Quality is indeed moderated by Top Management. Thus, Hypothesis 3b is supported by the findings.

4.6 Summary of Supported/ Not Supported Hypothesis

In the following Table 4.8 a summary is provided about the acceptance or rejection of proposed hypothesis.

TABLE 4.7: Moderated Mediation

Hypothesis	Effect	Boot SE	LLCI	ULCI
Probing Moderated Indirect relationships				
Low level of TM	0.13	0.03	0.05	0.18
High level of TM	0.24	0.03	0.18	0.35
Index of moderated mediation	0.03	0.02	0.01	0.09

TM=Top Management, Boot SE= Bootstrap Standard errors, LLCI=Lower Limit Confidence Interval, ULCI= Upper Limit Confidence Interval.

TABLE 4.8: Summary of Hypothesis

Hypothesis	Statements	Status
H_1	Creative Leadership influences positively Innovative Project Success.	Supported
H_{H2a}	Creative Leadership influences positively Teamwork Quality.	Supported
H_{H2b}	Teamwork Quality positively related to Innovative Project Success.	Supported
H_{H2c}	Teamwork Quality mediates the relationship between Creative Leadership and Innovative Project Success.	Supported
H_{H3a}	Top Management's supportiveness will moderate the relation between Creative Leadership and Teamwork Quality, resulting in a stronger relationship when Top Management exhibits stronger support.	Supported
H_{H3b}	The indirect influence of Creative Leadership on Innovative Project Success through Teamwork Quality is anticipated to be stronger in the presence of more supportive Top Management and weaker when Top Management is less supportive.	Supported

Chapter 5

Discussion and Conclusion

In this segment of the study, a comprehensive overview is presented, discussing the contributions and significance of the research outcomes. The findings hold substantial importance, considering the pivotal nature of the variables under consideration. This chapter encapsulates the study, providing a narrative on the hypotheses or research questions posed earlier based on the obtained results.

This research serves as a valuable addition to project management literature, particularly in its focus on innovative project success as a dependent variable. Given the central role of innovative project success in project management, the study contributes significantly to the field. The independent variable, Creative Leadership, plays a crucial role in project-based organizations, where the social responsibility of the corporation impacts project outcomes. The analysis in this study delves into the relationship between creative leadership and innovative project success, offering insights beneficial for organizations engaged in projects.

Additionally, the study explores the relationship between Teamwork Quality and innovative project success, acknowledging the critical role of employee engagement in project management. Top Management, acting as a moderating variable, is pivotal in project management, influencing the mechanisms of projects involved in projects. The study yields insights into the moderating role of Top Management.

In summary, this research contributes significantly to project management by examining the impact of Creative Leadership on Innovative Project Success, mediated by Teamwork Quality and moderated by Top Management. The results

validate the assumptions regarding the relationships among variables, emphasizing the importance of Creative Leadership, Teamwork Quality, and Top Management in achieving innovative project success. The study underscores the role of Top Management as a key factor influencing the proposed relationships. This section provides comprehensive answers to the research questions posed at the study's outset.

5.1 Discussion

This section provides a comprehensive review of the study's findings and contributions. The significance of the results is underscored, considering the vital nature of the variables involved. Additionally, the hypotheses formulated earlier are revisited and discussed in light of the empirical findings, thereby encapsulating the essence of the study's outcomes.

This study represents a valuable addition to the existing body of research in project management, particularly in the context of innovative project success as the dependent variable. Given the paramount importance of project success in project management discourse, this research holds particular relevance in advancing the understanding of factors influencing project outcomes. Creative leadership, serving as the independent variable, plays a pivotal role in project management endeavors, especially within project-based organizations where projects are predominantly managed. Furthermore, the creative leadership styles for the organizations emerges as a crucial determinant that can significantly impact project success. Through an analysis of the relationship between creative leadership and innovative project success, this study sheds light on an essential aspect and the dynamic of the support of top management.

5.1.1 Question1: How does Creative Leadership relate to Innovative Project Success?

Hypothesis No 1: Creative Leadership will have a significant positive impact on Innovative Project Success.

The relationship between creative leadership and innovative project success is a dynamic and multifaceted area that has garnered substantial attention in contemporary organizational research. Creative leadership encompasses a set of behaviors and attributes demonstrated by leaders that stimulate and support creativity among their team members. Innovative project success Young and Poon (2013), on the other hand, refers to the effective implementation of novel ideas and solutions resulting in the achievement of project objectives.

Numerous studies suggest a robust and positive correlation between creative leadership and the success of innovative projects. Mumford and Licuanan (2004) emphasize the critical role of creative leaders in orchestrating the expertise and relationships within a team. Leaders who exhibit a transformative Fileborn and Vera-Gray (2017) and visionary approach tend to inspire creativity among team members, fostering an environment conducive to innovation. This aligns with the idea that leaders can articulate a vision that emphasizes long-term goals, encouraging individual and collective efforts toward innovative work processes and outcomes Amabile (2018).

Zhou and Wu (2018); Shalley et al. (2009) provide insights into the mechanisms through which creative leadership influences innovation. They argue that leaders who support and encourage divergent thinking, risk-taking, and idea implementation contribute significantly to the creative potential of their teams.

Moreover, Shin et al. (2017) highlight the importance of cognitive diversity within teams, emphasizing that creative leaders can leverage differences in thinking styles and perspectives to enhance team creativity, which, in turn, positively influences innovative project success.

The positive impact of creative leadership on innovative project success is further underscored by the role of leaders as determinants of Top Management Schein and Schein (2018); Zaman et al. (2021). Leaders shape the values, norms, and practices within an organization, fostering a culture that either inhibits or promotes creativity. A culture that encourages experimentation, open communication, and the recognition of diverse ideas is more likely to support innovation and, consequently, project success.

In conclusion, the relationship between creative leadership and innovative project success is intricate and well-supported by research. Creative leaders contribute to project success by fostering a culture of innovation, inspiring creativity among team members, and effectively orchestrating the diverse expertise within their teams. The references provided offer valuable insights into the nuanced dynamics of this relationship, highlighting the significance of creative leadership in driving innovation and ensuring the success of projects.

5.1.2 Question2: How does Creative Leadership relate to Teamwork Quality?

Hypothesis No 2a: Creative Leadership positively affects Teamwork Quality.

The relationship between creative leadership and teamwork quality is a critical aspect of project dynamics, encompassing how leaders influence collaborative efforts and the overall effectiveness of teams.

Creative leadership, characterized by visionary thinking, encouragement of novel ideas, and a supportive environment, plays a pivotal role in shaping the quality of teamwork within a project.

Research consistently indicates a positive and substantial relationship between creative leadership and teamwork quality. One key mechanism through which creative leadership influences teamwork quality is by fostering a culture that values and supports open communication, collaboration, and the integration of diverse perspectives (Eisenbeiss et al., 2008; Shipton et al., 2006). Leaders who encourage creativity create an environment where team members feel empowered to share their ideas and opinions, leading to enhanced communication and collaboration.

Amabile et al. (2004) highlight the importance of leaders in creating a supportive work environment for creativity, which, in turn, positively influences teamwork quality.

Leaders who provide autonomy, recognize and reward creative contributions, and promote a sense of psychological safety contribute to a work culture where team members are more likely to engage in high-quality collaboration.

Moreover, creative leaders often exhibit transformational leadership behaviors, which include inspiring and motivating team members to exceed their own expectations Bass and Bass Bernard (1985). Transformational leaders create a shared vision and inspire commitment, fostering a sense of unity and shared purpose among team members, ultimately enhancing teamwork quality (Bass (Bass and Bass Bernard, 1985; LePine et al., 2008).

The positive impact of creative leadership on teamwork quality is further evidenced by its role in mitigating conflicts and enhancing problem-solving capabilities within teams (Klein et al., 2009; Rousseau et al., 2014). Leaders who encourage creative thinking contribute to a work environment where conflicts are addressed constructively, and teams are better equipped to navigate challenges collaboratively.

In summary, the relationship between creative leadership and teamwork quality is intricate and well-substantiated by research. Creative leaders contribute to high-quality teamwork by fostering a culture that supports open communication, collaboration, and diverse perspectives.

The references provided offer insights into the multifaceted ways in which creative leadership positively influences teamwork quality within projects.

5.1.3 Question3: What is the Connection between Teamwork Quality and Innovative Project Success?

Hypothesis No 2b: Teamwork Quality positively affects Innovative Project Success.

The connection between teamwork quality and innovative project success is a critical aspect of project performance, highlighting the interplay between effective collaboration and the achievement of innovative outcomes.

Research consistently demonstrates a positive and significant relationship between the quality of teamwork and the success of innovative projects.

Teamwork quality contributes substantially to innovative project success by fostering an environment conducive to creativity and idea generation (West, 2012; Anderson et al., 2014).

High-quality teamwork is characterized by open communication, trust, and collaboration, creating a foundation where team members can freely exchange ideas and engage in collective problem-solving West (2012).

Teamwork quality enhances the ability of a team to pool diverse skills and perspectives, promoting innovative thinking and problem-solving Shipton et al. (2006). A cohesive and well-functioning team is better equipped to navigate the complexities of innovative projects, ensuring that individual contributions align seamlessly to achieve project goals.

Furthermore, teamwork quality positively influences the implementation of innovative ideas by providing a supportive context for experimentation and risk-taking (Katzenbach and Smith, 1993; Keller et al., 2012; Rousseau et al., 2014).

Effective teamwork West (2012)ensures that team members feel psychologically safe to express unconventional ideas and contribute to the innovative process.

In summary, the connection between teamwork quality and innovative project success is well-supported by literature, emphasizing the pivotal role of effective collaboration in driving successful outcomes in innovative endeavors.

5.1.4 Question4: Does Teamwork Quality act as a mediator between Creative Leadership and the success of innovative projects?

Hypothesis No 2c: Teamwork Quality will mediate the relationship be- tween Creative Leadership and Innovative Project Success.

The question of whether teamwork quality mediates between creative leadership and innovative project success involves examining the role of teamwork quality in the relationship between creative leadership and the ultimate success of innovative projects. To address this, we can delve into the concept of mediation and explore relevant literature.

Mediation, in the context of this question, refers to the process through which the impact of one variable (creative leadership) on another variable (innovative project success) is transmitted through a third variable (teamwork quality).

In other words, teamwork quality acts as an intermediary mechanism through which creative leadership influences the success of innovative projects.

Research has suggested that teamwork quality often plays a mediating role in the relationship between leadership and outcomes. For instance, in the context of creative leadership, studies have shown that the influence of creative leadership on innovative outcomes is, at least in part, mediated by the quality of teamwork within a project team (Carmeli et al., 2010; Shin and Hur, 2020; Zhou and Li, 2018).

These studies suggest that creative leadership might exert its influence on innovative project success by fostering high-quality teamwork. Creative leaders who encourage open communication, idea sharing, and collaboration create a team environment conducive to innovation.

In turn, this positive teamwork quality contributes to the success of innovative projects.

In summary, teamwork quality could act as a mediator between creative leadership and innovative project success, channeling and enhancing the positive impact of creative leadership on the ultimate outcomes of innovative projects.

5.1.5 Question 5: Does Top Management Moderates the Relationship between Creative Leadership and Teamwork Quality?

Hypothesis No 3a: Top Management's supportiveness will moderate the relation between Creative Leadership and Teamwork Quality, resulting in a stronger relationship when Top Management exhibits stronger support.

The question of whether top management moderates the relationship between creative leadership and teamwork quality involves exploring the role of top management in influencing the strength or direction of this relationship.

To provide a detailed answer, we can examine the concept of moderation and draw insights from relevant literature.

Moderation, in the context of this question, refers to the idea that the relationship between creative leadership and teamwork quality may vary under different conditions set by top management.

In other words, the impact of creative leadership on teamwork quality may be contingent on the level of support, guidance, or interventions provided by top management.

Research suggests that top management Elenkov and Manev (2005) can indeed play a moderating role in shaping the effectiveness of creative leadership in fostering positive teamwork quality. For example, studies have indicated that when top management is supportive of innovative initiatives and provides resources, creative leaders are better able to influence and enhance teamwork quality within their teams (Shin and Zhou, 2007; Amabile and Pratt, 2016).

The studies suggest that the support of top management Elenkov and Manev (2005) can enhance the impact of creative leadership on teamwork quality. When top management provides a conducive environment, resources, and encouragement for creativity and innovation, creative leaders are more effective in fostering high-quality teamwork within their teams.

In summary, top management can act as a moderator, influencing the strength and nature of the relationship between creative leadership and teamwork quality.

Supportive top management enhances the ability of creative leaders to cultivate a collaborative and innovative team environment, ultimately impacting the quality of teamwork.

5.1.6 Question6: What is the indirect impact of Creative Leadership on the success of innovative projects through Teamwork Quality, considering low and high levels of support from Top Management?

Hypothesis 3b: The indirect influence of Creative Leadership on Innovative Project Success through Teamwork Quality is anticipated to be stronger in the presence

of more supportive Top Management and weaker when Top Management is less supportive.

Indirect Effect of Creative Leadership on Innovative Project Success:

Path 1: Creative Leadership → Teamwork Quality:

In-depth Understanding: Creative leadership involves fostering an environment where employees feel empowered to think innovatively. Leaders who encourage idea-sharing, risk-taking, and open communication contribute to a positive teamwork climate Eisenbeiss et al. (2008).

Team Dynamics:

Research emphasizes the impact of creative leadership on team dynamics, influencing collaboration, and interpersonal relationships within the team Zhou and Hoever (2014).

Cultural Influence:

Top Management shaped by creative leadership plays a pivotal role in determining how team members interact and collaborate Amabile and Pratt (2016).

Path 2: Teamwork Quality → Innovative Project Success:

5.1.7 Collaboration and Innovation:

Teamwork quality is a key determinant of project success, particularly in innovation-driven projects. Studies indicate that effective teamwork positively correlates with innovative project outcomes (Ehrhart (2004). Adaptability: High-quality teamwork is associated with the adaptability of teams to changing project requirements, a crucial factor in the success of innovative projects West (2012).

Interdisciplinary Collaboration:

Research highlights the significance of interdisciplinary collaboration within teams for achieving innovative project goals Hoegl and Gemuenden (2001).

Moderation by the Support of Top Management:

Moderating Effect of the Support of Top Management:

Leadership Alignment:

the support of top management aligns project objectives with the creative vision set by leaders. This alignment strengthens the impact of creative leadership on teamwork quality Shin and Zhou (2007).

Resource Allocation: Supportive top management influences resource allocation, providing teams with the necessary tools and resources to enhance teamwork quality for innovative projects Amabile and Pratt (2016).

Cultural Reinforcement:

The role of top management in reinforcing a culture that values creativity further enhances the indirect effect of creative leadership on innovative project success Shin and Zhou (2007).

In summary, the journey from creative leadership to innovative project success is a multifaceted process. It involves nurturing teamwork quality through creative leadership practices, leveraging the dynamics of collaborative teams, and ensuring that the support of top management serves as a catalyst for these processes.

This comprehensive approach not only highlights the interconnectedness of these elements but also underscores their collective influence on realizing the full potential of creative leadership in achieving innovative project success.

Embarking on the trajectory from creative leadership to innovative project success involves a nuanced approach. Creative leadership, characterized by an environment fostering innovation, idea-sharing, and open communication, intricately shapes

team dynamics and interpersonal relationships within the team (Eisenbeiss et al., 2008; Zhou and Hoever, 2014).

The cultural influence of top management, sculpted by creative leadership, plays a pivotal role in determining team interaction and collaboration, thereby influencing the overall team culture Amabile and Pratt (2016).

This journey further unfolds as teamwork quality becomes a linchpin for innovative project success. Effective collaboration and adaptability within high-quality teamwork correlate positively with innovative project outcomes, echoing the necessity for interdisciplinary collaboration within teams (Hoegl and Gemuenden, 2001; West, 2012).

The crucial role of top management emerges as a moderator, aligning project objectives with the creative vision set by leaders, influencing resource allocation, and reinforcing a culture that values creativity – collectively enhancing the indirect effect of creative leadership on innovative project success (Shin and Zhou, 2007; Amabile and Pratt, 2016).

In essence, this comprehensive approach underscores the interconnectedness of creative leadership, teamwork quality, and the support of top management, emphasizing their collective influence in realizing the full potential of creative leadership for achieving innovative project success.

5.2 Research Implications

5.2.1 Theoretical Implications

This research contributes to the existing literature by delving into the multidimensional constructs of creative leadership, teamwork quality, and the support of top management.

It enriches theoretical frameworks by providing a nuanced understanding of the interplay among these variables.

Integration of Leadership Theories:

Theoretical Perspective: Integrating various leadership theories (e.g., transformational, transactional) and team dynamics theories, the study bridges gaps in understanding how creative leadership influences innovative project success through the mediating mechanism of teamwork quality Hoegl and Gemuenden (2001), with the moderating influence of top management.

Longitudinal Studies for Causality:

Methodological Innovation: Encouraging future researchers to conduct longitudinal studies will help establish causality. Observing the evolution of creative leadership's impact on innovative project success over time, considering changing team dynamics and management support, adds depth to the research.

Advancing Leadership Theories:

Leadership Scholarship: The study contributes to the advancement of leadership theories by shedding light on how creative leadership, encompassing visionary aspects and empowering team dynamics, plays a pivotal role in fostering innovation within project teams.

Teamwork Quality as a Catalyst:

Organizational Behavior: The research theorizes teamwork quality as a catalyst that transforms creative leadership into tangible project success. This challenges traditional leadership paradigms, emphasizing the importance of collaborative team dynamics in realizing innovation.

Moderating Role of Top Management:

Strategic Leadership: By introducing the moderating role of top management, the study extends strategic leadership theories. It underscores the strategic importance of aligning the support of top management with creative leadership initiatives to optimize innovative project outcomes.

This research significantly contributes to the theoretical landscape by intricately exploring the multidimensional constructs of creative leadership, teamwork quality, and the support of top management, thereby enriching existing frameworks and providing a nuanced understanding of their interplay.

From a theoretical perspective, the study integrates diverse leadership theories, including transformational and transactional frameworks, along with team dynamics theories. By doing so, it effectively bridges gaps in understanding the intricate mechanisms through which creative leadership influences innovative project success.

This influence is further elucidated through the mediating role of teamwork quality, with the moderating effect of the support of top management. This integrative approach adds depth to our comprehension of how these variables collectively contribute to project success.

Methodologically innovative, this research encourages future scholars to embark on longitudinal studies. This approach can unravel the causality between creative leadership and innovative project success. By observing the evolution of creative leadership's impact over time, accounting for changing team dynamics and variations in the support of top management, researchers can provide a more comprehensive and nuanced understanding of the relationships under consideration.

Within the realm of leadership scholarship, this study makes significant strides by highlighting the pivotal role of creative leadership. By encompassing visionary aspects and fostering empowering team dynamics Fong and Snape (2015), creative leadership de Souza and Begeer (2020) emerges as a crucial factor in promoting innovation within project teams.

This not only advances our understanding of leadership theories but also underscores the transformative potential of creative leadership in driving innovative outcomes.

In the domain of organizational behavior, the research propounds the concept of teamwork quality as a catalytic force. It posits that teamwork quality acts as a transformative element that translates the principles of creative leadership into tangible project success. This conceptualization challenges traditional leadership paradigms, emphasizing the centrality of collaborative team dynamics in realizing innovation within project settings.

In the context of strategic leadership, this study introduces the crucial moderating role of top management. It extends existing strategic leadership theories by underlining the strategic importance of aligning the support of top management with creative leadership initiatives. This alignment is posited as a key optimization strategy for achieving innovative project outcomes. Overall, the theoretical implications of this research contribute substantially to the evolving landscape of leadership and organizational theories, offering valuable insights for future exploration and refinement.

5.2.2 Practical Implications

Leadership Development Programs:

Organizational Development: Organizations can use study findings to design leadership development programs focusing on nurturing creative leadership skills.

These programs should emphasize the integration of visionary leadership with team empowerment strategies.

Team Building Strategies:

Human Resource Management: Insights into the pivotal role of teamwork quality suggest that HR strategies should prioritize team-building initiatives.

Fostering effective collaboration, communication, and interdisciplinary skills can significantly enhance the quality of teamwork.

Strategic Alignment with Top Management:

Strategic Management: Organizations can strategically align the support of top management with creative leadership initiatives.

This involves ensuring that organizational structures and cultures reinforce creativity, providing resources, and actively endorsing the creative vision set by leaders.

Project Management Practices:

Project Management: Project managers can leverage study findings to tailor project management practices.

Emphasizing creative leadership principles and understanding the influence of teamwork quality on innovative project success can guide project managers in achieving innovative outcomes.

Continuous Learning Culture:

Organizational Culture: Building a culture of continuous learning and adaptability is crucial. This includes encouraging experimentation, embracing failure as a learning opportunity, and fostering an environment where teams feel empowered to contribute creatively.

Practical Implications

The practical implications of this study offer actionable insights for organizations across various facets of their operations, fostering leadership development, enhancing teamwork, ensuring strategic alignment, refining project management practices, and cultivating a culture of continuous learning.

Organizations can strategically utilize the study findings to shape leadership development programs. These programs should be designed to cultivate creative

leadership skills, emphasizing the integration of visionary leadership with strategies that empower and engage teams. By incorporating these insights, organizations can contribute to the evolution of leadership capabilities within their workforce.

Insights into the pivotal role of teamwork quality advocate for a recalibration of human resource management strategies. Organizations should prioritize team-building initiatives that foster effective collaboration, communication, and interdisciplinary skills. By investing in the development of high-quality teamwork, organizations can enhance overall team performance and contribute to project success.

Strategic management within organizations can leverage the study's insights to align the support of top management with creative leadership initiatives.

This strategic alignment involves ensuring that organizational structures and cultures actively support and reinforce creativity. Providing necessary resources and endorsing the creative vision set by leaders can create an environment conducive to innovation.

Project managers can benefit from the study's findings by tailoring project management practices. Incorporating creative leadership principles into project management strategies and understanding the influence of teamwork quality on innovative project success can guide project managers in navigating the complexities of project implementation. This, in turn, can contribute to the achievement of innovative project outcomes.

Fostering a culture of continuous learning and adaptability emerges as a key practical implication. Organizations are encouraged to create an environment that promotes experimentation, embraces failure as a valuable learning opportunity, and empowers teams to contribute creatively. By instilling this culture, organizations can enhance their overall adaptability and resilience in the face of evolving challenges.

In essence, the research has broad implications for both academia and practice, offering a comprehensive understanding of the intricate relationships between creative leadership, teamwork quality, and the support of top management in the context of innovative project success. This multifaceted perspective provides

a foundation for future research and actionable insights for projects striving to enhance their creative and innovative capabilities.

5.3 Limitations and Future Directions

This study has yielded crucial findings, its strengths and offering project managers multiple avenues to pursue success. Despite these strengths, the study also reveals certain limitations, suggesting opportunities for further research to expand the scope of inquiry within project management. These identified deficiencies not only encourage advancement in the field but also widen the path to success. Acknowledging these limitations is a valuable practice for researchers, as it provides insights into areas for future investigation. By transparently discussing its limitations, this study aims to guide future research endeavors in a constructive manner.

Firstly, the methodology employed in this study utilizes convenience sampling, a form of non-probability sampling wherein data is collected from readily accessible respondents. While convenient, this method is widely regarded as the weakest form of sampling due to its lack of rigorous selection criteria. In contrast, probability sampling techniques aim to gather responses using systematic practices, yielding more reliable samples than non-probability methods.

Secondly, data collection is limited to a single source. All study variables, including Creative Leadership, Teamwork Quality, Innovative Project Success, and Top Management, are assessed through a questionnaire administered to one individual. Additionally, the study adopts a cross-sectional time horizon, capturing data at a single point in time. Furthermore, the relatively small sample size of 368 responses suggests a narrower scope, limiting the generalizability of findings. Demographically, there is a notable gender disparity among respondents, with males comprising a significantly higher percentage than females, potentially skewing perspectives.

The researcher's role in this study is minimally invasive, with no deliberate manipulation of environmental factors or study variables. This lack of manipulation is recognized as a limitation, as it restricts the researcher's ability to control external

influences. Moreover, the study is confined to a national level, focusing solely on project-based organizations within Pakistan, which constrains the study's broader applicability.

Future research endeavors should heed these limitations to foster more impactful innovations. Recommendations for future investigations include adopting probability sampling techniques, such as random sampling or stratified sampling, to enhance research robustness. Longitudinal studies, with repeated measurements over time, are advised to provide more comprehensive insights compared to cross-sectional designs. Increasing the sample size and ensuring demographic diversity among respondents can enhance the breadth of future research findings. Researchers are also encouraged to consider greater intervention in organizational environments to facilitate more thorough scrutiny.

Additionally, expanding the study's scope to include international project-based organizations and exploring mediators and moderators beyond Teamwork Quality and Top Management could enrich future research outcomes. For instance, investigating employee satisfaction as a mediator between Creative Leadership and Innovative Project Success could offer valuable insights into the dynamics of organizational success.

Future research endeavors could explore the influence of different top management structures and leadership styles on the interplay between creative leadership and innovative project success. This exploration will empower projects to tailor their strategies effectively to specific leadership contexts, ensuring alignment with organizational goals.

The integration of organizational learning theories into research represents a promising avenue for shedding light on how projects adapt and evolve based on the creative initiatives introduced by leaders. This holistic perspective will encompass both individual and collective learning processes, offering a comprehensive understanding of the transformative potential within organizations.

Addressing these limitations and embarking on these suggested future directions will undoubtedly contribute to the ongoing development of knowledge in the field. This proactive approach holds the promise of offering more nuanced insights into

the complex relationships between creative leadership, teamwork quality, and innovative project success.

5.4 Conclusion

In conclusion, this research has illuminated critical aspects of the intricate interplay between creative leadership, teamwork quality, and innovative project success. Study, while providing valuable insights, is not without limitations.

Generalization challenges are inherent, given the specificity of the study's context. Acknowledging this, the call for cross-cultural studies becomes evident. To ascertain the universal applicability of the identified relationships, future research should delve into how cultural nuances influence the effects of creative leadership on teamwork quality and, subsequently, innovative project success.

The study simplifies the multifaceted nature of creative leadership, prompting a call for a deeper exploration of different leadership styles and their specific impacts on innovation. Leadership taxonomy, embracing charismatic, transformational, and other styles, could enrich our understanding of leadership dynamics. Furthermore, the oversimplification of top management's role as a moderator beckons further investigation into the nuanced nature of this factor within various organizational structures and industries. Proposing future directions, there is a compelling need for mixed-methods approaches. Combining quantitative measures with qualitative insights would provide a more comprehensive understanding of the intricacies involved in the relationship between independent variable creative leadership, teamwork quality and the independent variable of innovative project success . This comprehensive perspective extends to multi-level analyses, encompassing both team and organizational levels to capture the cascading effects throughout the organizational hierarchy.Hoegl and Parboteeah (2003)

In the broader context of organizational behavior and management, this research contributes to the ongoing discourse on how creative leadership serves as a catalyst for innovation.

While this study provides a foundational understanding, the journey does not end here. The outlined limitations and proposed future directions set the stage for a continuous exploration of the dynamic relationships shaping the innovative Dörner (2012) landscape within organizations. Embracing these challenges and opportunities, future research can propel the field forward, offering nuanced insights that contribute to the sustainable development and success of organizations in an ever-evolving global landscape.

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Appendix

CAPITAL UNIVERSITY OF SCIENCE AND TECHNOLOGY

ISLAMABAD

Department of Management Sciences

Questionnaire

Dear Respondent,

In pursuit of a deeper understanding of how Creative Leadership influences innovative project success, I am conducting a research survey. This study aims to gain insights into the relationship between Creative Leadership and the success of Innovative Projects, with a particular focus on the mediating influence of Teamwork-Quality and the moderating impact of Top Management.

As one of our valued respondents, I kindly request approximately 10 minutes of your time to complete this questionnaire thoughtfully. Please rest assured that your personal information will remain undisclosed, and all data will be treated with the utmost confidentiality.

Sincerely,

Muhammad Hassan Khan,

MS Research Scholar,

Faculty of Management and Social Sciences,

Capital University of Science and Technology, Islamabad

Section-I

Demographics

Gender:

☐ Male   ☐ Female

Marital Status:

☐ (A) Single   ☐ (B) Married

Age:

☐ 20-30   ☐ 31-40   ☐ 41-50   ☐ Over 50

Job Experience same Field (In Years):

☐ 0-5   ☐ 6-10   ☐ Over 10

Scale: Choose one of the five options given below for each item. Answer to each item is measured on five-point scale with anchors labeled: (1) strongly disagree, (2) disagree, (3) neither disagree nor agree, (4) agree, (5) strongly agree.

Section-II

Creative Leadership

Scale: Choose one of the five options given below for each item. Answer to each item is measured on five-point scale with anchors labeled: (1) strongly disagree, (2) disagree, (3) neither disagree nor agree, (4) agree, (5) strongly agree.

Please keep in mind your current organization while filling this questionnaire.

1	The leaders in my organization encourage and support creative thinking and innovative ideas.	1	2	3	4	5
2	Our leadership fosters an environment where employees feel comfortable sharing new ideas.	1	2	3	4	5
3	The leadership of our organization actively involve employees in decision-making processes.	1	2	3	4	5
4	The leadership in my organization values and recognizes innovative contributions from employees.	1	2	3	4	5
5	Our leadership positively influences the overall creativity and innovation within the organization.	1	2	3	4	5
6	My leaders inspire and motivate employees to think creatively and come up with innovative solutions.	1	2	3	4	5
7	The leaders in my organization are open to experimenting With new approaches and taking calculated risks.	1	2	3	4	5
8	The leadership in my organization provides resources and support for employees to pursue creative projects.	1	2	3	4	5
9	Our leaders are accessible and approachable, making it easy for employees to discuss their ideas with them.	1	2	3	4	5
10	The leadership in my organization encourages continuous learning and development to enhance creative thinking.	1	2	3	4	5

Section-III

Teamwork Quality

Scale: Choose one of the five options given below for each item. Answer to each item is measured on five-point scale with anchors labeled: (1) strongly disagree, (2) disagree, (3) neither disagree nor agree, (4) agree, (5) strongly agree.

Please keep in mind your current organization while filling this questionnaire.

1	Sufficient incentives were provided by top management.	1	2	3	4	5
2	The project is viewed as a strategic activity by Top Management.	1	2	3	4	5
3	There was sufficient commitment to the implementation of the project.	1	2	3	4	5
4	Sufficient resources were provided for the implementation of the project.	1	2	3	4	5
5	I am highly engaged in this job.	1	2	3	4	5
6	The general manager of the division actively supported the project.	1	2	3	4	5
7	Top management identified the implementation of the project as a critical priority.	1	2	3	4	5

Section-IV

Innovative Project Success

Scale: Choose one of the five options given below for each item. Answer to each item is measured on five-point scale with anchors labeled: (1) strongly disagree, (2) disagree, (3) neither disagree nor agree, (4) agree, (5) strongly agree.

Please keep in mind your current organization while filling this questionnaire.

1	Generally, our projects meet their time objectives.	1	2	3	4	5
2	We are usually good at delivering projects within budget.	1	2	3	4	5
3	Our projects usually result in tangible benefits for the organization.	1	2	3	4	5
4	Generally, customers of our projects are satisfied with the outcome.	1	2	3	4	5
5	Project specifications are usually met by the time of handover.	1	2	3	4	5
6	Our key employees are usually happy with the way our projects are Managed.	1	2	3	4	5
7	Project team members are usually happy working on projects.	1	2	3	4	5
8	There are often clearly identified intangible benefits from the projects we carry out.	1	2	3	4	5
9	End users are usually happy with the results from our projects.	1	2	3	4	5
10	We usually employ an effective project management process.	1	2	3	4	5
11	Overall, we are very successful at projects.	1	2	3	4	5

Section-IV

Top Management

Scale: Choose one of the five options given below for each item. Answer to each item is measured on five-point scale with anchors labeled: (1) strongly disagree, (2) disagree, (3) neither disagree nor agree, (4) agree, (5) strongly agree.

Please keep in mind your current organization while filling this questionnaire.

1	My organization emphasizes team building.	1	2	3	4	5
2	My organization supports cooperative spirit.	1	2	3	4	5
3	My organization promotes feelings or sharing among employees.	1	2	3	4	5
4	My organization encourages innovation and accepts change.	1	2	3	4	5
5	My organization develops or adopts new technology bravely.	1	2	3	4	5
6	My organization emphasizes the development of new technology.	1	2	3	4	5

There are no sources in the current document. (Hoegl & Gemuenden, 2001)