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**Impact of Innovative Leadership
on Project Performance with the
Mediating Role of Team
Creativity and Moderating Role
of Collaborative Culture**

by

Faisal Jamshed

A thesis submitted in partial fulfillment for the
degree of Master of Science

in the

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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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Abstract

The purpose of this study is to examine the factors which are effecting project performance and to understand how innovative leadership tribute to project performance in project based organizations. Mediating role of team creativity is examined between innovative leadership and project performance which demonstrates that when the leader is innovative, they promote and motivate the employee's contribution towards the objective. The study proposed framework to examine moderating role of collaborative culture which strengthens the relationship between innovative leadership and team creativity enhancing the mutual sharing knowledge from different cultures and mindsets. Data was collected from 265 employees working in different project based organization. The data was analyzed. The result of the study demonstrate all the positive relations between the variables of framework. The study significantly contributes to the area of research specifically in the domain of project management. The implications, limitations and future directions are discussed.

Keywords:: Innovative Leadership, Project Team Creativity, Collaborative Culture, Project Performance.

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Abbreviations

CC Collaborative Culture

IL Innovative Leadership

PP Project Performance

TC Team Creativity

Chapter 1

Introduction

1.1 Background of the Study

Leadership can be considered as unique critical gauge for the success of the project especially in those companies which are project oriented where resources are limited and project needs to be delivered in a defined period (Dwivedula, Bredillet & Muller, 2016). Leadership or the management is the competency of an individual to motivate, influence and empower others to subsidize towards the efficiency and prosperity of the organization (House et al., 1999, pg. 184). Leadership can be reflected as most persuasive interpreters of innovation (Dorfman, 2004; Javidan & Carl, 2005). Organizations have become dominant and persistent; the significance of management and leadership is needed to maintain equalizer stability in the organization. Team members mostly become uneasy to manage and understand the structure of the organization and as a result; the managers are clueless about the thinking of their subordinates (Bolman & Deal, 2017). Therefore, according to Osborne & Winterkorn, there is a need to develop the leadership for the organizations to be prosperous in projects. Leadership in projects is transferable from the project manager (vertical leadership) towards the employee line (horizontal leadership) along with these managerial and theoretical dimensions that further inspects the flexibility of the project team towards guidance or headship. (Yu, Vaagaasar, Muller, Wang & Zhu, 2018).

In organizations, one of the elementary piece of leadership is to affect the standard, thinking and behavioral hope that employees grasp (Verburg, 2019). Organizations should concentrate on the style of leadership and workplace (Rifaldi, Ramadhini, & Usman, 2019). Novelty is not pointless, yet this is the need for 21st-century organizations for their focused edge (Kremer, Villamor, & Aguinis, 2019). Innovation and creativity are huge for organizations to endure and the two of them reinforce one another (Hong, Hou, Zhu, & Marinova, 2018).

The initiative is innovation enhances creative ideas (Pieterse, Van Knippenberg, Schippers, & Stam, 2010). Invention is essentially categorised in two terms: product innovation and procedure innovation. Product innovation is to pick up customer fulfillment by organization competency of delivering new creative services. While, process innovation uncovers organization capacity of proposing preferable practices over the existing procedure to improve execution (Tsai, Huang, & Kao, 2001). Adjei (2013) defines innovative leadership as the blend of different leadership styles inside the organization to impact employees to produce creative thoughts and outlooks.

Innovative leadership is the significant leadership graces that motivates their supporters to try sincerely and creative for a novel target (Khalili, 2017). Innovative leadership is connected to employee creativity notwithstanding the reliance of employees on their leaders. Current investigation has been done to study the association inside innovative guidance and creativity or the development of team to the setting of undertaking based organizations (Lukoschek, Gerlach, Stock, & Xin, 2018). Innovative leadership being creative animates the employees to think creatively to get solutions. These acts of leaders encourage team creativity (Mittal & Dhar, 2015).

However, the project teams validate themselves and get succes by adopting the innovative leadership. An innovative leader is one who administers the change procedure and advances the introduction of new thoughts and proposals in a firm by making the strong condition of collaboration (Basadur, 2004; Newman, Herman, Schwarz, & Nielsen, 2018). Collaboration is said to be the potential tool to cope up with ambiguous situations and to lift the team culture (Melander &

Lakemond, 2015). Collaboration assists the project-based organizations with the opportunity to exploit new experiences and attaining advantages from their expertise and experience (Yan & Wagner, 2017; Peng, Heim & Mallick, 2012; Yan & Dooley, 2014), thereafter, leading towards better organizational culture.

Collaborative culture affects both project performance and organizational performance in a constructive manner (Avery, McKay & Wilson, 2008). Organizations with a workforce having cultural collaboration can positively affect the commitment of employees, their morale and innovative capability to work (Goldman, Gutek, Stein & Lewis, 2006). In the perspective of this collaboration regarding the culture is considered to be a major strength of the innovative project development team. Many studies indicate that a positive outcome of projects need the project context that links the relationship between leadership competencies and project performance. Projects are increasingly relying on teamwork and an effective leader is one who motivates the team members to work that result in an effective outcome (Potipiroon & Ford, 2017).

Jesus, Antony, Lepikson, and Cavalcante (2015), reveal that innovative leadership always engages employees with their work and organization to get a beneficial response. It enhances the collaboration of employees within the organization. Collaboration is said to be the potential tool to cope up with ambiguous situations and to lift the team culture (Nidumolu, 1995; Croom, 2001; Melander & Lakemond, 2015). Collaboration assists the project-based organizations with the opportunity to exploit new experiences and attaining advantages from their expertise and experience (Yan & Wagner, 2017; Peng, Heim & Mallick, 2012; Yan & Dooley, 2014), thereafter, leading towards better organizational culture.

Collaborative culture affects both individual performance and organizational performance in a constructive manner (Avery & McKay, 2008). Organizations with a workforce having cultural collaboration can positively affect the commitment of employees, their morale and innovative capability to work (Goldman, Gutek, Stein & Lewis, 2006). Several scholars view leadership as the conceptualization, which evolves around influencing but is also sensitive towards collaborative culture. Basic beliefs, systems values of the individual impact the cultural forces as

the leadership mechanisms (Bass, 1997; Ayman, 2004). Researchers show that collaborative culture brings the shared values in the project team for open communication, teamwork, diversity, risk-taking, and inspiration towards innovative climate (Barczak, Lassk, & Mulki, 2010). Cultural collaboration in project-based organizations is considered the innovative strength of the project team.

Due to the complex nature of projects, it is difficult for an individual to cope up with the latter, therefore it entails joint efforts by the team members. This requires better team collaboration to get the team familiar and comfortable working within a team, as the collaborated team performs well under complex situations (Espinosa, Slaughter, Kraut & Herbsleb, 2007), consequently leading towards better project performance. Collaboration is said to be the potential tool for survival through the undefined and vague circumstances and reduce them for lifting the project performance (Nidumolu, 1995; Croom, 2001; Melander & Lakemond, 2015). Collaboration assists the projectized organizations with the opportunity to exploit the experiences and technologies of the other firms and gaining advantage from their expertise and experience (Yan & Wagner, 2017; Peng, Heim & Mallick, 2012; Yan & Dooley, 2014), thereafter, leading towards better project performance. Joint-Ventures is always one of the forms of collaboration and many public-private partnerships exist to carry out the project, which also brings complexity along with it; requiring the partnership members to cope up with the allied risks and ambiguities (Marrewijk, Clegg, Pitsis & Veenswijk, 2008).

Palmer and Dunford (1996) discovered that leadership challenge is to align organizational and human needs and develop a powerful base and strategic agenda for creating faith and belief among the team. Creativity is the need of today's business while also favourable to change the common environment of project-based organizations towards the innovative and structural one (Duncan, Estabrook, 1976; Tushman & O'Reilly, 1996). Many other studies of researchers show that there is continue rapid evolve between organizations and their leadership challenges, and researchers have a high competition to keep pace. Consequently, this is crucial to investigate the influence of innovative guidance because it impacts significantly on important areas like human resource management, organizational culture and

employee relations among themselves and with the manager. Therefore, increasing the innovative and creative capability of the team both holistically and individually in an organization environment.

1.2 Gap Analysis

Leadership traits of project-based organizations have recently been adopted by many theorists. Chen & Nadkarni (2016) shed light in the fact that people come up with different qualities, behaviors, and characteristics, which influence the flair of management based on trait theory of leadership. Innovative work behaviour can be considered an important competency strengthening the foundations of organizations and building up the individual capability of employees. Innovative work behavior stems from cultural intelligence (De Waal, 2012). The previous studies given by Jianhong & Sucheta Nadkarni (2016) opines that the people have different behaviours, characteristics and qualities that have greater influence on the leaders and their style.

Chreim (2015), Gronn (2015) and White, Currie, and Lockett (2016) conduct their research that, the fundamentals of leadership around the dissemination of innovation crosswise speaks the research gap or examination hole, requiring an increasingly longitudinal research structure. Second, tending to a requirement regarding the extra logical comprehension of headship components (Liden & Antonakis, 2009). Fitzgerald et al., (2002, 2013); Greenhalgh, Robert, and Macfarlane, (2004); Hartley and Benington, (2010) and Martin, Currie, and Finn (2013) highlights that there is a need to know more about the leadership features because of making the innovative settings in the context of selected organization.

Furthermore, in professionalized settings, dispersion of innovation requires shared leadership and intelligent impact among a team of employees for which the goal is to lead each other to the accomplishment of team or organizational objectives (Currie & Spyridonidis, 2018).

The present investigation is a reaction to the research by Lukoschek et al. (2018) to review the innovative role of leader on project employee creativity working in

the organizations which are project oriented. The study or exploration can address this gap. Besides, the moderating role of a collaborative culture in various organizations is utilized. However, collaborative culture in Project-based association is absent in the writing. So, utilizing the existing literature gap with influential dimensions, the current study is proposing a unique framework that explains how innovative leadership results in project performance through team creativity. The current construct also proposes that collaborative culture controls the association between innovative leadership and the development or the creativity of the team. It cannot be tried exploratory along with its applicability in projectized firms so far and very limited studies conducted on the fact; therefore, the present study fills the specified gap.

1.3 Problem Statement

Researchers highlighted innovative leadership as one of the emerging and critical factors of project-based organizations due to its new structure. Innovation and creativity are the existence cause of organization in this quickly developing and quickly evolving world. For this reason, organizations need their employees to be creative. Be that as it may, a minimal amount of research work have examined how of employee creativity. Employees within the organizations are not getting a strong and creative nature. So, there we need a job of imaginative scholars who lift their self-conviction and ability to do their work by building inventive thoughts and shared culture, accordingly worker's creativity will upgrade.

Each organization needs creative and inventive employees and leaders since it turns into the prerequisite of time to deliver creative and construct effective ventures. This idea has not been tried in the area of project-based organizations. Employees are frequently endorsed when they impart their thoughts and enthusiasm while conversing with their managers or leaders since they are deficient with regards to self-discipline. Besides directing the job of the task, collaborative culture with the relationship of innovative leadership and team creativity has not been tried during past investigations especially. By investigating the connection between factors

will assist to perceive the results of innovative leadership with the support worker creativity.

One person cannot have the complete knowledge of every dimension so collaborated culture needs to be opted creatively by the team fellows to create the organization to achieve development performance. The impression of Innovative Control on Development Performance with arbitrating part of Team Imagination & controlling part of Collaborative Culture can be the novel framework of project management, which has not been studied yet in the Pakistan.

1.4 Research Questions

Established on above-mentioned problems, the goal of existing research is to catch replies to the following research questions, a summary of the queries have been given below :

Research Question: 1

Does Innovative Leadership affect Project Performance?

Research Question: 2

Does Team creativity mediate the affiliation between the Innovative Leadership and Project Performance?

Research Question: 3

Does Team creativity mediates the relationship between the Innovative Leadership and Project Performance?

1.5 Research Objectives

The research objective is to explore the relationship between Innovative Leadership, Team Creativity, Collaborative Culture and Project Performance according to the proposed theoretical framework. Also, collaborative culture will be used as a moderator to identify the strength of the relation of innovative leadership to implore its relevant impact on team creativity. The main aim is to explain the theoretical framework of the new dimension of innovative leadership in project

management to enhance project performance.

The specific aims of the research work have been given below :

Research Objective: 1

To investigate the association between Innovative Leadership and Project Performance.

Research Objective: 2

To check the relationship between Innovative Leadership and Team Creativity.

Research Objective: 3

To check the relationship between Team Creativity and project Performance.

Research Objective: 4

To examine the relationship of Innovative Leadership and Project Performance through Team Creativity.

Research Objective: 5

To scrutinise the moderating relationship regarding the Collaborative Culture on the relationship of Innovative Leadership and Creativity of Team.

1.6 Significance of the Study

During the past years, organization are only providing the limited services and are silent to the innovative project management. As, many projects are currently undergoing in our country and every project has a different environment, features, behaviors scale, needed skills, timeline and leadership styles, etc. Respectively every project has different reactivity towards its situation too. For this, leadership style tends to be of a unique and novel nature.

This study examines the personal dispositional abilities of project managers like innovative leadership and team creativity to enhance the project performance because in the modern age of globalization projects have been the most popular way of performing tasks in a specific duration with the novelty in that. Therefore, concepts regarding the innovative leadership of the project manager need to be clarified to confirm regarding the successful completion of the project and have a positive creative impact on society in general. Now a day's research focused on the

process of innovation towards new resources. The team is constantly coordinated by their effective leader for the productive final result. Effective leaders connect with their employees by a creative procedure that includes denying issues, settling those issues and executing the new solutions (Schoemaker, Heaton & Teece, 2018). This research will uncover the positive effect on project employee inventiveness through creative leaders under a collaborative culture. Collective culture gives the team an empowering feel. It is significant towards the novelty and creativity of employees in an organization (Bammens, 2016). These steps greatly influence in enhancing the creative sense in the employees by providing them the ways through innovative leadership.

The study will fulfill the theoretical gap existing in pervious literature because innovative leadership is not considered popular due to less availability in the research field, tough several dimensions of leaderships affect organizational behaviors. Therefore, this framework will contribute to the prevailing body of knowledge. Theoretical contribution demonstrates that innovative leadership is meaningfully and absolutely connected towards the project performance. Innovative management of project managers can be capable to make the environment creative by giving opportunity towards the openness to the resources to ensure the smooth running of organizational processes that result in the creativity of team individuals under collaborative culture. The contribution of this construct signifies that innovative leaders can help in achieving project performance when employees are highly motivated and trust leaders with the involvement of cultural collaboration as an external factor.

This framework will subsidize completely in a creative manner regarding the attainment of the anticipated aims and indicators of the project including the dynamic participation of the project manager making the best use of leadership on the team creativity through his cultural interactions. The study opens new features of observing innovative leadership in the projects to be studied further in detail. It will also help the companies which are project oriented regarding the Pakistan towards recognizing the significance of the impact regarding an innovative leadership on project performance in projectized organizations effectively

and efficiently. There is a very rare interest exposed by investigators to verify the consequences in the framework of Pakistan's project-oriented companies. Thus, the research can also done its addition to the domain of the project's performance under the circumstances of Pakistan.

1.7 Supporting Theory

Social Learning Theory, formulated by Bandura in 1977. This theory will help to support all the relations of the theoretical framework directly or indirectly to each other. It depicts the exchange of leader and employee social behavior, traits and shared goals and their impact on each other as well.

1.7.1 Social Learning Theory

The social learning theory of Bandura highlights the implication of perceiving and signifying the performs, mental settings and the enthusiastic replies from the other people. Bandura (1977) states: Learning would be exceedingly persistent, but also unsafe. Luckily, most human behavior is found out observationally through signifying: from observing others any innovative ideas, a thought of how new practices are performed, and on later events this perspective fills in as a guide for activity. (p22).

Social learning theory illuminates the human behaviour including the repeated and conforming association concerning rationality, conduct, normal effects. Since it envelops consideration, memory, and inspiration, social learning theory traverses both intellectual and conduct behaviors. Bandura's supposition improves the research work done by Miller and Dollard (1941) on social interpretation ideas. Bandura's effort is recognised with the theories of Vygotsky and Lave, which also underline the central work of social learning.

Social Learning Theory is considered to be appreciated in illuminating regarding the persons can adopt fresh things and produce new performs by observing others. Hence it has been accepted, in the context of the theory, that it is concerned about

the procedure of the observation based learning amongst the people. The perspective (mental states) is also critical towards learning through social interactions. In the perspective of this impression, Bandura articulated not only regarding the outside components can inspire the knowledge and behaviour but there is more addition of what he claimed it as inherent assistance, which can be considered as the form of intrinsic reinforcement in the conclusion of performing out the behaviour (for example feeling of accomplishment, conviction, completion, and much more). Since knowledge is so complex, there is a vast variety of psychological theories to simplify the learning of the individual and the actual reason why they learn. Hence, there can be three central thoughts at the primary level of social learning theory. Firstly, it can be an option that individuals can learn via awareness. Secondly, it can be an impression that inward conditions of mind are a fundamental part of the process. In the end, this theory observes that, there is something which has been considered as more knowledgeable, it doesn't suggest that it can be helpful in bringing the change in behaviour.

Theory of Social learning places the team can learn regarding the cooperation with others by perceiving and replicating the performance of social contacts which are most important, which includes managers or leaders (Bandura 1986). The heads can take the responsibility as a rule and they are accountable for performance evaluation and resource allocation, so the members of the team are slanted for deliberately observing the performance of their leader and, suitably, how they choose to behave (Mayer, Aquino, Greenbaum, & Kuenzi, 2012). Accordingly, in the present research, it is exhibited innovative management as a successful and actual instrument for improving group originality.

Rather than individual creativeness, team innovativeness as a shared marvel towards the generation of original and valuable thoughts about services, merchandises, developments, and measures through the group of workers (George 2007; Shin and Zhou 2007). This theory demands synergism, moral, social, ethical and psychological support for complementation and success (George and Zhou 2007; Gong et al. 2013). Peng, Heim, and Mallick (2012) have also urged in his findings that collaboration is a key to success, especially, when new projects are initiated.

To accomplish a high level of innovativeness among a whole group, the colleagues should always exchange points of view, ideas and knowledge, endeavor to check the propensity to the shared conventionality, risk taking, then challenges the manager plus companions, as opposed to producing new thoughts independently (Amabile et al. 1996; George and Zhou 2007; Gong et al. 2013).

Staffs can learn regarding the association with other people through detecting and replication the performance of critical communal associates, which includes managers and leaders (Bandura 1986). Therefore, it can be considered as most significant for the supervisors of the team regarding the actively supporting of the relational messages and the interchange of viewpoints in a working environment that is expressively and behaviourally harmless and trustworthy (Somech & Drach-Zahavy 2013; Wright & Cordery 1999).

In the present research work, the hypothetical model has been developed and verified, which can be founded on the theory of social learning, to clarify in what way and at what time the innovative management can influence the creativity of the team among groups with dissimilar compositional features. The employee will react the same as the leader reacts toward him. Project Employee innovativeness ought to be the main inclination of their leader. If the leader is innovative and motivate, the employee will learn and respond in the shape of creativeness, which leads to project performance. Employees and subordinates react more decidedly when their leader benefits them (Hollander, 1978).

The more employees' work in supporting conditions, the more they will be valued and more they will work hard for the organization for achieving project performance. The team does not feel resistance is required to talk, and questions more in the solid condition that thus provoke new creative thoughts and promote project performance (Yu, Mai, Tsai, and Dai, 2018). Individuals having high creativity are motivated and in results, they accept challenges and difficulties as coincidence.

Chapter 2

Literature Review

2.1 Innovative Leadership

Adjei (2013) defines innovative leadership as a mixture of various leadership styles within an organization to effect the staff to generate imaginative thoughts and resolutions. Innovative management is one of leadership style that inspires their followers to work hard and creative for a common objective (Khalili, 2017). Innovative leadership shows a leading role in achieving the competitive edge of creativity in support of organizations.

Innovative leadership has been defined in three terms including facilitating, integrating and directing. Facilitating increases the creativity of employees as leader involvement is inventive. Integration merges the employee's contribution to the leader's contribution. Directing is that the employee is pulling off the leader's idea. Innovative leadership carries out a dominant part in perceiving the combative edge for creativity in favor of organizations (Randel & Jaussi, 2019).

2.2 Team Creativity

Team can be explained to be a collection of individuals employed in an organization regarding defined period and coordinating with each other to achieve shared and agreed objectives that cannot be achieved by a single person (Salas, Dickinson,

Converse & Tannenbaum, 1992). Creativity is mostly separated into individual, team and organizational levels. “Team creativity can be observed as the incorporation of individual proficiency and creativity.” (Taggar, 2002, p 317). Creativity increases by enhancing team knowledge and encourage team cohesiveness, which constitutes the project goals (Stashevsky & Koslowsky, 2006).

2.3 Collaborative Culture

Lederach (1995), states culture as the mutual knowledge and patterns generated by an established set of individuals for recognizing, inferring, articulating, and retorting to the social certainties around them. Also, collaboration is a vibrant and active progression between individuals that are commonly focussed on exploiting and achieving approximately (Homer, Brodie & Leap, 2010). A collaborative culture, referring to Barczak, Lassk, and Mulki (2010) as well as Lopez, Peon, and Ordas (2004) is demarcated equally the team’s collective morals and opinions about the organizations and provides for flexibility, exposed communication, and inspiration of admiration, cooperation, risk-taking, and multiplicity.

The present study focuses on the intellections and is defined as collaborative culture as two or more persons/parties working together to achieve agreed outputs and targets. (Um & Kim, 2018; Sheu et al., 2006; Cao & Zhang, 2011). Peng et al., (2012) established that culture collaboration elevates and increases the effectiveness regarding the organizational projects over the usage of modern technological skills and its involvement.

2.4 Project Performance

While talking about project performance, there is no single definition of project performance; rather having subjective measures with relevance to every stakeholder involved in the project (Dai & Wells, 2004; Rekveldt, 2011; Pollanen, Abdel-Maksoud, Elbanna & Mahama, 2017). Researchers further corroborated regarding the performance of the project can be measured next to cost of time

plus scope also mentioned as “the management triangle” alongside the quality of provision of services (Shrnhur, Levy & Dvir, 1997; Atkinson, 1999; Boyne & Gould-Williams, 2003; Rekveldt, 2011).

2.5 Innovative Leadership and Project Performance

Performance is an outcome of knowledge, competence, capability, and persistence aimed at particular prescribed behavior (Nahod & Radujkovic, 2013). The phenomenon of performance is positively associated with the manager’s leadership style (Borman & Motowidlo, 1993; House, Hanges, Javidan, Dorfman & Gupta, 2004). Individuals that are well aware of their surroundings know what kind of behavior to be exhibited to a particular response which is created using an intrinsic motivation to have high-performance levels in situations characterized by leadership. The motivational and behavioral features are positively associated with better project performance (Chang, Yuan & Chuang, 2013).

In concurrence with leadership style (Keller, 2006), team composition, characteristics, and cohesion among the team members are the major antecedents for the project performance (Ammeter & Dukerich, 2002). Innovative leadership helps the team affiliates to share and make use of each other’s skills and expertise by minimizing the task and relationship difference among themselves (Moye & Langfred, 2004) and enhance their performance and creativity to facilitate the improvement of the project performance (Zhao, Xie & Zhang, 2002; Carr & Kaynak, 2007; Mesmer-Magnus & DeChurch, 2009).

One of the effective actions of information is innovation. Innovation regarding knowledge activities concurrently vital for the procedure of the operation in organizations (Pirola-Merlo, Hartel, Mann & Hirst, 2002). It enables the interface and encourages the construction of workers and project performance (Zaccaro, Rittman, & Marks, 2001). Innovative leadership is pre-requisite to producing, division and loading the inspired notions about work performance (Overall, 2015). Innovative leadership can show its part in inspiring the sympathetic atmosphere

to enhancing the acquaintance into an association for project performance (West, 2000). In command to progress, the project performance of the association innovative leadership raises to all administrative actions that help people in the group to generate and share the information (Marks, Mathieu & Zaccaro, 2001). To improve the project performance in an organization it is necessary that both the knowledge sharing and application of that knowledge have remained identified to enable the construction of innovative notions and developments (Mas-Tur, 2014). Furthermore (Birasnay, 2014) said that management of knowledge plays an imperative character in the connection between innovative leadership and project performance. (Singh, 2018) inspected the part of leadership in the acquaintance of administration development. Leaders participated in the improvement of the presentation over exploiting acquaintance in the administrations (Boutty, 2000). Therefore, the prior revisions focused on the connotations among the innovative headship and project performance through which knowledge shares at the firm level (Brodbeck, 2001). The aspect of works determined that facts administration and division donate meaningfully for innovative leadership and presentation of the organization at a secure level (Bryant, 2003). Though, in the construction of projects, this kind of study is still occasional. The revolution privileged develops the essential need to improve and part the information although, on the other hand, the innovative leadership involves providing rewards to share knowledge (Edmondson, Bohmer & Pisano, 2001). So, it is also anticipated that this kind of privileged improves innovative skills in the performance of the project over the development of information allocation in constructive ventures (Suparak & Avery, 2016).

For the innovative leadership, it is indispensable for endorsing and realizing the approach and building, encouraging the knowledge and inspiring the crew to project performance. Consequently, another significant reason is innovative management which can be considered as influential notch in which workers work for invention (Ozrhon, 2013). In the development of the project performance and construction, the innovative leadership took as a serious feature in the previous studies. In complete studies, it is still in their infancy on the success of diverse sorts of

management on the project performance. After a huge share of the prose which is fixated on innovative leadership, it is now mentioned that innovation form an inter-organizational standpoint in the project's performance (Ozrhon, Abott & Aouad, 2014).

For innovative leadership, knowledge sharing is an important factor. Innovation is mainly connected through the exchange of material with the change. In an organizational project, the information division empowers the transmission of experiences that dodges the errors (Bam, Stobbeleir & Vlok, 2019). For integrating multidisciplinary expertise, the knowledge-based views show an imperative part in the project performance and also provide a platform for members. To progress the messages amongst the members plus partners within the company the knowledge exchange is working as a channel for project performance. (Mas-Verdu, Ribeiro-Soriano & Roig Dobon, 2014).

An innovative leaders motivate its workers to struggle for the areas and concentration and considerate to the project performance. This innovative leadership improves the inventive determination in a project and contributed toward their goals. For unconventional things that contribute to the innovative goals in an organization, the innovative leadership enhances the creative efforts for the project performance (Bass & Riggio, 2006). Innovative leadership is strong support for the crew associates in a mission. Conferring to Bass and Riggio, a frontrunner who has reliant return behavior must acquire workers' arrangement on the work to be accomplished in exchange of plunders for distributing the act in giving time mount. Additionally, a frontrunner who promotes the dynamic administration by strong supervision on employees identifies errors or mistakes and then acts for creativeness (Odusami, Iyagba & Omirin, 2003).

Project performance is a dynamic system and it continues to change the theme into an emotional atmosphere, the proportion of technology also fluctuations and the members. For the progress ad success of the project growth, the changes in the crew according to the time needs also be taken into contemplation (Hooijberg & Choi, 2000). Researches highlighted that creativeness is revealed to be appropriate for the project performance administration concept. Project performance

has demonstrated to show a crucial part in the shaping of serious development application accomplishment, it is also a key illuminating concept in touching the project conclusions. Team members in a project prerequisite to join with each other for the exchange of data and information which new conditions or advanced goods (Birasnay, 2014).

Therefore, this suggests the first supposition

H₁: There is positive relationship between Innovative Leadership and Project Performance .

2.6 Innovative Leadership Plus Team Creativity

A team can be explained to be a collection of individuals employed together for a defined period and coordinating with each other to achieve shared and agreed objectives that cannot be achieved by a single person (Salas, Dickinson, Converse & Tannenbaum, 1992). The literature of project-based organizations identified the importance of leader behavior to the team and for the organizational outcome (Bass, 1985 & Lowe et al. 1996). The recent world economic crisis has made organizations to make adaptability with innovation their key formula to success and retain a competitive edge over the competitors.

Making creative procedures to carry in an organization to a higher point is a source of fruitful leadership (Kouzes and Posner, 2012). Consequently, the Innovative style of leader encourages the employee's creativity when pursued by a different independent parameter which is the premise of project team acceptance towards leadership and social related circumstances (Gagne and Deci, 2005). The creative style of leaders notices the enthusiasm of his team and animate them towards brilliant creativity (Imran, Ilyas, and Aslam, 2016).

Innovative leadership in the team activity shape improved structures and process collection management. Which stretches the high shot and permit them to identify the changes and pressures (Hoegl, & Gemeunden, 2001). Innovative leadership provides essential properties to follow their development opportunities. Innovative leadership is more future concerned with and dynamic. Consequently, they use a

diversity of approaches to produce improved and more concepts to lay down the stress in the team activity and process to first-rate the greatest ones. Thus, this kind of leadership chooses higher valued projects with developed and improved plans in the business (Noruzy, Dalfard & Nazari-Shirkouhi, 2013).

Innovative leadership has more oriented leadership skills than usual they spread an equal of higher maturity and professionalization in their management, teamwork and human resource management and acquaintance of organizations according to the project administration (De Dreu & Weingart, 2003). Furthermore, innovative leadership is additionally it is more open in the perspective of the speech of their behavior regarding the project. They distinguish their occasions regarding the modification and have the potential to the strategic options for team creativity. Team creativity positively influences the learning and innovation in a team of the project. In the case of exceedingly innovative leadership, the influence of the team is particularly strong (Tellis, Prabhu & Chandy, 2009).

The major element of teamwork quality is the innovative leader in teamwork. Different schools of innovative leadership have revealed that innovative leadership inspirations group the team creativity positively (Ensley, Pearson & Amason, 2002). The innovative leadership is completely connected with the numerous presentation standards for team creativity. It can be considered as a constructive connection between innovative leadership, behavior, attitudes, perception and team creativity. There is also a high correlation of leadership and contingent reward in team creativity (Dulebohn et al, 2012).

By testing and developing a model of team communication there is a need to improve the understanding of team creativity. Consistent with the old research which recognizes the position of role-based representations and examines the leadership roles (Bass & Riggio, 2006). Innovative leadership is connected with the modification of knowledge and evidence. Information division is the transmission of knowledge and it enables information sharing which avoids mistakes repeated in the construction of the project (Bam, Stobbeleir & Vlok, 2019). According to the view of the knowledge, the team creativity in structure acts as the stand for the knowledge and the source for integration in the multidisciplinary knowledge

(Mortensen, & Hinds, 2001). Discussion in knowledge delivers the material which networks to simplify announcements among the team in an association. Furthermore, there is always increased consideration of information division in the team for its creativity in an association. The concentration on information and information distribution of project-based society it remains unfortunate (Ozrhon, 2013). In an organization in which followers and possessions are combined the team creativity is crucial. The way through which team members linked is mentioned as the performance of project societal assets and exchange the resources between the members (Farh, Lee, & Farh, 2010). The innovative presentation in the project-based administrations is considered an asset in the team activity. Most importantly, for the presentation of the group including the organization, success knowledge is important and social capital gives an arena to the team members for the resources. That's why it can be vital to discover the inside relationship among its knowledge and communal capital for the team activity in an organization (Overall, 2015).

In the level of the team regarding the project, creativity can be important to study because the creativity of team using different approaches. It also concentrates on the maintenance of the functions in a project. It encourages the openness and smooth relation between the persons to increase the effectiveness of the project (Pirola-Merlo, & Mann, 2004). Therefore, theorists identified that behavior improves the performance of the team like weighing individuals' contributions conferring to their skills and knowledge (Gladstein, 1984). Team originality uses the consensual valuation techniques to explain the quantity of innovative leadership which includes creativity and productivity (Rickard, 2001).

To identify the measurement of team creativity the consensual valuation is observed which includes the three components such as creativity, productivity and innovation the team creates (Khedhaouria, & Ribiere, 2013). Team creativity states fresh and socially important products in the calculated area. In a system when team creativity refers to the productivity amount to an organization that practices properties to accomplish the goals (Rickards, & Moger, 2000). Team creativity is collectively a concept of creativity and productivity with innovation.

Innovative leadership is a process of transformation an invention or idea into the actions which are useful on commercial bases and valuable. Team creativity can produce artistic philosophies, but it can also contain more struggle in the announcement and conversation developments. The connection between innovative leadership and team inventiveness is created in diverse studies (Hogl & Gemunden, 2001).

Hence, the second supposition is stated as follows:

H₂: There is positive relationship between Innovative Leadership and Team Creativity.

2.7 Team Creativity and Project Performance

In the recent age of technological advancements, innovation is the key element organizations are relying on to have a competitive edge over competitors. Teams have to develop innovativeness to keep up with the latest trends and maintain market position (Vrontis et al., 2016). Empirical research on innovation literature reveals that it is advantageous for organizational, team creativity and project performance (Gibson & Birkinshaw, 2004; Jansen, Simsek & Cao, 2012). Team followers shared the vision of completing goals and aspirations to express future administration's path (Larwood et al., 1995; Tsai and Ghoshal.1998). Organizational learning along with individual innovative capabilities allows better individual performance in particular and organizational performance in general (Kobarg, Wollersheim, Welpé & Sporrle, 2017).

Literature suggests that values are important for establishing a successful innovative style of leadership within the organizations (Sen & Eren, 2012). Innovative leadership is the practice of giving direction that leads to create and implement something novel that is significant for the projects of the organization (Ailin & Lindgren, 2008). Leadership capabilities are a major source for successful innovative leadership (Heizer& Render, 2011). Managers promote project performance through a style of leadership. Therefore, it is very necessary to ensure out the impression of different styles of leadership on imagination and performance of

projects (Cai, Lysova, Khapova, & Bossink, 2019).

Creativity of team has been researched on three stages which include and single person, the group and the organization. On behalf of the creativity on a team level, it is stated that inspired styles highlight the communication partialities which creating a variety from the utmost adaptive to the most advanced (Pirola-Merlo, & Mann, 2004). Furthermore, the perception of innovation on the incentive and originality on the resolution needed by recommending an original model of team ingenuity and project performance (Kaufmann, 2004). For the team creativity on the organizational level, a complete framework inspiring the data which appreciates the influences crosswise points of examination of specific, crew and project performance. The team creativity in the projects acting a connecting role for the links between individual creativity and organization creativity as well as (Chen, 2006). Project performance was frequently functional through the organization to produce imaginative notions and to transference the formed ideas into the convenient technology, outcomes of products and the services. The knowledge which is existing nowadays might be inadequate to gratify the innovative conditions which mandatory for modest newly generated product rewards, needed the high levels of imagination from the team of the development (Leenders, 2003).

Team creativity is gradually indispensable for the act of the development teams in the newest product expansion because of the organizations facing the speedy developments in the knowledge and technology and troubles and inexpensive atmosphere or the brief time of the product. In organizations, the originality in the team and project is a subcategory of a broad field in the innovation of administrations (Jaafari, 2000). Innovative leadership in the organization suggestively be contingent on the creativity of the team in that project to participate the several types of knowledge and information. Imaginative ideas into the innovative leadership pay the services, products, procedure or occupational model (Paulus, 2000). Creativity of the team is a multipart communal organization as it can involve the grouping plus incorporation of different participations plus information from the multidisciplinary and dependent team associates in a project. However, team creativity in the project can assist to appreciate the social communication of the

associates with others to produce further creative outcomes (Chen, 2006). In the project performance, team creativity comprises personal debate development and it encourages the communication of team associates in the project. By the stimulation of project performance, the team creativity can cheer team associates to pay and share the understandings of the customers, the market and the design of the products. Furthermore, the creativity in the team members can solve the problems and facilitates the interaction among the project performance which leads to project success (Serrador & Turner, 2015).

In the project performance, the traditional task is to manage the individual projects in a proper way, also the project development in an appropriate manner and systematized way. The members of the team are properly inspired and also corresponding to the project after the necessities of the customers in the project and actively perform the duties. Team members also value to create the ideas of the project which accomplished for all sponsors (Bonner, Ruekert & Walker Jr, 2002). Moreover, the performance of the project of an association can be done for leading the company, because of the accurate developments are accepted. The projects accept the experienced project managers and control which results in the sustainability and value-creating objectiveness of all the sponsors in a project-oriented organization. Accordingly, project managers are attentive to the creation of circumstances that support and adoptive the project performance, both in the association and its outside atmosphere (Morris & Gerald, 2011).

Hence, the third hypothesis can be stated as:

H₃: There is positive relationship between Team Creativity and Project Performance.

2.8 Mediating the Role of Team Creativity between Innovative Leadership and Project Performance

Creativity is mostly separated into individual, team and organizational levels.

Team creativity can be observed as the incorporation of individual proficiency and creativeness. (Taggar, 2002, p 317). Creativity increases by enhancing team knowledge and encourage team cohesiveness, which constitutes the project performance (Stashevsky & Koslowsky, 2006). Researchers extended the consequence regarding the interconnection of the team on the creativity of the team and innovations. This effect improves the arbitrating part of team creativity with respect to the relation concerning innovative guidance and project performance (Tung & Chang, 2011).

The creative environment positively affects team performance through the transaction of knowledge (Lin, Liu, Liu & Huang, 2018). An innovative leader must be able to share the knowledge for the derivation of new innovative ideas and decision-making processes with the team members, which will boost creativity and progress the performance of the development (Kuo & Lee, 2011). The development performance and team associate's creativity are more inspired and qualified in the accomplishment of extremely advanced projects and managing them with uncertainty (Khedhaouria, & Ribiere, 2013). The team creativity embraces the uncertainty as a chance and practice unidentified solution ways as a constructive contest and utilize other techniques, which are best to these projects (Huang & Yang, 2012). The team associates prefer the developed autonomy, innovative leadership and project performance, and better creativity and erraticism of knowledge and skills (Pirola-Merlo, & Mann, 2004).

With the expansion in the structuring expertise rapidly, the business becomes more data exhaustive, that's why it converted into the domineering to transfer invention by the sustainable leanings (Bell, Villado, Lukasik, Belau & Briggs, 2011). Innovative leadership regarding the construction is beneficial for sustainable projects regarding the quality and technical levels. The innovative leadership in the project performance attracts both criticism and admiration. Furthermore, the primary criticism was that the construction doesn't have the innovativeness in the leadership and no team creativity (Bonner, Ruekert & Walker, 2002). However, construction is inherently innovative. The organizations were approved by enhancing the companies to improve the project performance effectiveness where

the form of that organization seen as a success story.

The contest of sharing knowledge in the organization and directing the connection to convey the innovative leadership had faced the different complexity of diverse projects. Which further related to creativity of the team (Pirola-Merlo, & Mann, 2004). The project performance of construction activities that are experienced because of strong price orientation, these are various scholars look like the lack of knowledge sharing and innovative leadership (Chen, 2006). However, different factors hindering the innovative leader in the projects, like the preservation of recognised performs and distress of upcoming partnership. High level of monetary investments required for the project performance for the limited period and resources. That's why the innovative leadership for project performance in the group has become a developing issue and demanding question (Bam, Stobbeleir & Vlok, 2019).

Innovation is described as the novel or significantly improved product, process in which the production and delivery method also includes, it also depends on the marketing method or managerial method. Moreover, innovation is the group, progress, and application of notions that are new to the association and practically or commercially assistances that organization. The time of innovative leadership is thoroughly correlated to society's success (Chen, 2006). For the main time, it is recognized that innovative leadership is necessary for the many characteristics of the act in the organization. In the previous studies, it is investigated that many factors which predict the administrative novelty, with the strategy, knowledge, statement, and meeting of the sponsors. The positive expectations of the innovative leadership from team creativity is a crucial factor (Bates & Khasawneh, 2005).

Innovative leadership is essential for the implementation of innovative administrative approaches and building, which encouraging the organization's education and motivates the team. That's why innovative leadership has been considered as the significant reason in the determination of the degree in which workers try for innovation (Chen, 2006).

The prior studies showed that innovative leadership is a critical feature in the

progress of the organization and its effects project efficacy (Bam, Stobbeir & Vlok, 2019). Besides that, there is a huge part of works present which focused on the innovative leader in the organization, thus there are several studies that mentioned that team creativity facilitates the connection among innovative management and project performances.

The previous studies showed that the organizations focus on the innovative leader in the construction of the projects which influences the innovative productivity of the group members. Furthermore, the work in the projects- based organizations the topic is still considered as a point of research (Pirola-Merlo, & Mann, 2004). Also, admittance to information is the imperative factor for the project performance in the organization, and the development public circle also provides the arena for the team creativity who use the information as possessions. Thus, it is important to discover the inside connection among the data division among the members of the team or leaders and the performance of the development (Bam, Stobbeir & Vlok, 2019).

Hence, the fourth hypothesis would be:

H₄: Team creativity mediate the relationship between Innovative Leadership and Performance of the project of the project.

2.9 Collaborative Culture Moderate the Relationship between Innovative Leadership and Creativity of the Team

Collaboration is measured in the form of capability of the human intelligence to respond to intricate and new situations in an inflexible manner (Espinosa, Slaughter, Kraut & Herbsleb, 2007). Peng, Heim, and Mallick (2012) argued that collaboration is the key to success whenever new projects are undertaken. Haycock (1998) summarised that creativity affects collaboration, which then comes out in team behavior. Cultural collaboration fosters group behavior positively and effectively enhances the workgroup productivity. The strong cultural work climate of the

organization with the same moral values positively affects the decision-making ability of the group (Oetzel, 2017).

Many scholars took collaboration's concept as that is ingrained in symbiotic advantage where effective collaboration maximizes the firm's performance and minimizes the transaction costs (Dyer, 1997). Collaborative culture comes to play when a single person is unable to complete the dedicated task and helps to exploit each other's resources and skills along with sharing and distributing the risk to lessen its impact (Huxham & Vangen, 2013). For the projects to perform better and gain a competitive advantage from other firms and projects, they have to focus on collaborative advantage rather than a competitive advantage within the project team to reach towards the mutually beneficial and agreed objectives and contributes the positive effects to better project performance (Dyer & Singh, 1998).

Collaborative culture approach claim that individuals as of numerous culture exert together to accomplish shared achievable project objectives from the mutual sharing of material between a leader and the team. That approach gives a sense that diverse establishment procedures and organizational cultures devour to be affiliated collaboratively. A collaborative culture is a lot well-known as a constant progression having an aim of creativity of team and proficient approaches (Dainty, Briscoe, Millet, 2001).

Researches show that collaborative culture increases as humans socially integrate under innovative leadership phenomenon and collaborative culture is absolutely connected with increased creativity of the team. Furthermore, the implicit theories show that the accurate formation for relation is expected to be critical and serve as a pathway of sense-making in their mutual behavior collaborations so that this guidance results in the leader-follower coordination (Weick, 1995). So that implicit theories results in the better understanding, interpreting and responsiveness to each other that will form creativity in leader-follower relation (Lord & Maher, 1991; Epitropaki, Sy, Martin, Tram-Quon & Topakas, 2013). Researchers suggested that this creativity related leaders' behaviors are strictly interconnected and this collaboration with the follower provide the clear innovative structure for dyadic relation.

In management, individuals and organizations (Ancona et al, 2001) use collaboration to define the overview of functioning practices, approaches, and performances, which manifest a culture of effectual and active integration. The collaborative culture encourages working environs wherever facts are spontaneously swapped over between the diverse members. The term "collaborative culture of project team" is used in the research to symbolize an exceedingly efficient and effective collaborative team accountable for a project under the exchange behavior of the innovative leader and team. The team takes along together numerous expertise and knowledge and eliminates the traditional obstacles which expand the operational and proficient innovative delivery of the project (Akintoye, McIntosh & Fitzgerald, 2000; Fleming, Koppelman JM., 1996).

The cultural hypothesis endorses the belief that team creativity increases as collaborative culture levels increase allowing more explorative learning (Schaik, Burkart, 2011). When there is a collaborative culture at the workplace; it affects employees' feelings towards work and manager positively (Triana, Jayasinghe & Pieper, 2015) enhancing both managerial and organizational performance. Duffy & Fearne (2004) have established that collaborative relationships help the team members to innovatively manage projects and involve in planning and decision making flexibly to elevate the link between the leader and the team.

Where there is a collaborative culture at the workplace, it affects employee's feelings towards work. It brings creativity positively by enhancing both managerial and organizational relations. Empirical studies have shown positive impacts of collaborative culture on project performance in particular or in general. Therefore, Collaborative culture fosters the group behavior of the team positively and effectively enhances the project performance. It also positively impacts the decision-making ability of the group.

Hence, the fifth hypothesis would be:

H₅: Collaborative culture moderate the relationship between Innovative Leadership and Creativity of Team

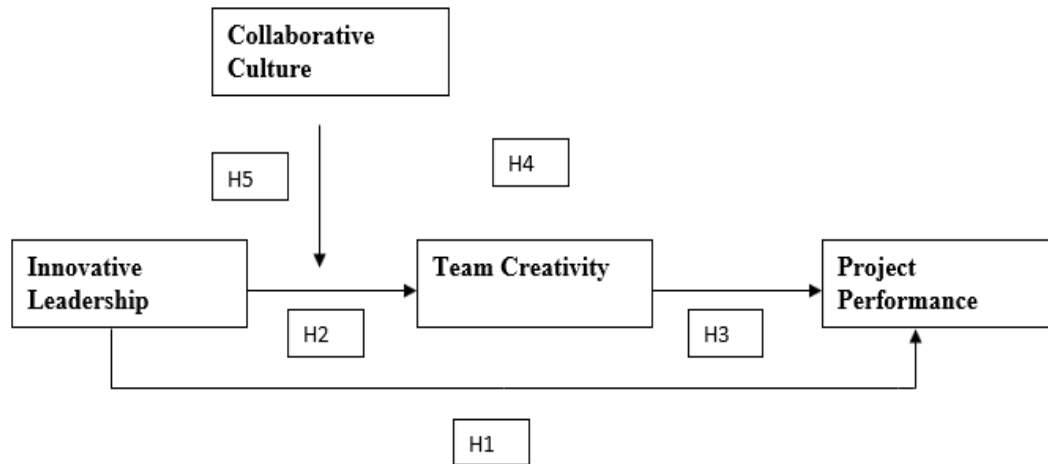


FIGURE 2.1: Research Prototypical of Innovative Management on Project Performance through Team Creativity: Moderation of Collaborative Culture

2.10 Research Hypotheses

H1: There is positive relationship innovative leadership and performance of the project.

H2: There is positive relationship between innovative leadership and team creativity.

H3: There is positive relationship between team creativity and performance of the project.

H4: Team creativity mediate the relationship between innovative leadership and project performance.

H5: Collaborative culture moderate the relationship between innovative leadership and creativity of team.

Chapter 3

Research Methodology

The following section explain the methods and procedures applied in this research to acquire consistent results. This discussion embraces particulars regarding type of study, research philosophy, unit of analysis, population, sample, sampling technique, sample characteristics, instrumentation, statistical tools, pilot testing, reliability scales analysis and data analysis of entire the variables and objects incorporated in the present research.

3.1 Research Design

The designing of the research is a context of the planning of the research for achievement; it describes the procedure for gathering data and to analyze according to this data.

3.1.1 Category of Research

The present research is used to highlight the implication of innovative leadership on project performance, for that matter, an inter-relational study has been accompanied. The target population for this research is organizations which are project oriented for Pakistan to become the required informations and wanted to gain realistic consequences. Initially, 350 questionnaires were distributed among

the target respondents but 265 genuine responses were collected.

The sample for this research mainly consists of the managerial and operational levels of different project-based organizations of the Rawalpindi and Islamabad of Pakistan. This data was together through a self-administered paper-and-pencil analysis. This present study will take part in the simplification of the consequences from the sample statistics that will possibly be revealed by the realistic result on the entire population of Pakistan.

3.1.2 Research Philosophy and Research Design

Diverse types of philosophical approaches are there characterized as a paradigm for social sciences that reinforce and backing scientific investigation. The data collection instrument is the one, which influences the adaptation of the particular philosophy related to research (Bazeley, 2003). This research will survey the hypothetical deductive research method, which is exclusively based on the determinism viewpoint of finding the reality utilizing data, in which the aforementioned research and prevailing theories were utilized to validate and support the predicted hypothesis that will then be verified empirically for authentication of the projected hypothesis.

The hypothetical deductive method is a predicted illustration of the scientific method. This research example is best fit for this research because it takes on a critical focus on findings, which is yet to be explored. There are two parts of the hypothetical deductive scientific method i.e., hypothesis, which is proposed for testing, and the other one is the deductive part that explains the test outcomes inferred from the hypothesis.

The results predicted from the hypothesis are associated with investigational data to fail or pass the decision. Conferring to this method, scientific investigation pledges by enclosing a hypothesis in an approach that could reliably be fabricated by a test on observable statistics. A result that runs antagonistic to projections of the hypothesis is inferred as a falsification of the hypothesis. A test that does not run antagonistic to the hypothesis substantiates the theory. It is then projected to associate the descriptive value of opposing hypotheses by testing how strongly

they are genuine by their forecasts.

Quantitative methods are used and valued to scope a huge level of the population normally in research. For that reason, this study can also exploit the technique of qualitative research to accumulate quality data to correlate variables to each other and for signifying the type of association concerning the variables used in this research.

3.1.3 Study Setting

The current research is related to the study of the field instead of the false situation. The variables included in the present study were neither deployed nor measured. The study was held between the employees and project managers of private project-based organizations by approaching them in their job setting and to make them able to complete the survey in an ordinary atmosphere of work.

3.1.4 Unit of Analysis

The most vital feature of the research work is the component of investigation. The component of investigation explains which characteristics are to be examined in this research. In a research study, a component of investigation can array since individuals to diverse crowds, cultures, countries and to organizations, etc. from where the researcher collects the data.

The current research is designed to see the influence of innovative leadership on the performance of the project, therefore; the unit of analysis was dyad i.e., the project managers who act as innovative leaders and as well as its impact on organization which will be analyzed by employees of project-based whereas other variables i.e project performance, team creativity and collaborative culture will be analyzed by managers.

To evaluate the impact of innovative leadership through team creativity needed to approach the specific sector of project-based organizations, which specifically bring about project performance in the workforce.

3.1.5 Time Horizon

The data collection was finished in 2 months. A cross-sectional study, the technique was adopted for the gathering of data for the present research. Because of the limited time period for accomplishment of the proposal has been needed, due to this the cross-sectional study was assumed to finish the work in an appropriate time.

3.2 Population and Sampling

3.2.1 Population

As project-based organizations are the emerging source of competitive advantage for Pakistan, in this way this sector is contributing in a massive way to attract other foreigners to invest in Pakistan, which in return is increasing the cultural diversity in the workforce and global recognition of Pakistan as a new emerging and developing country. Every project is unique irrespective of the industry and has some specific deadlines, objectives, and budgets whether its construction projects, NGOs project or IT projects, etc. It can be considered as the key responsibility of the project manager to complete the development within a definite budget, time and scope. These basic characteristics of projects hustle the project manager because he or she has no other option but to complete the project under the requirements.

The population exploited in this study was to embrace project managers/supervisors and employees working under construction industries in different Islamabad and Rawalpindi project-based organizations. The present research was pursued to deliberate on seven construction sector of project-based organizations whose names are kept confidential. These include both National level and international level project-based organizations including collaborative culture in the working environment, running various projects in the field of construction of hospitals and malls. The data has been gathered from the managers and teams of the project

including the relevant stakeholders of the projects. Almost 350 questionnaires targets to be distributed. Data was collected for measuring these four variables of concern i.e. Innovative Leadership, Team Creativity, Collaborative Culture and Project Performance.

3.2.2 Sample and Sampling Technique

The trial is a normally adapted procedure for data collection, the representative of the population. Sampling has two types. One is probability sampling and another is a non-probability sampling. In probability sampling, every opinion has an equal possibility to be picked as a sample and in non-probability sampling, it is pre-decided that which observation would represent a sample of the population. Both have their advantages as well as disadvantages. For the present investigation, suitability sampling was utilized because it can come under the non-probability specimen. As there are different arguments about the population of project-based organizations in Pakistan but exact is still unknown. Therefore, expediency sampling is the greatest appropriate procedure can be utilized in the investigation since using this technique randomly statistics can be gathered from the companies which are project based and belong to Pakistan, which effectively represent the true picture regarding the entire population in explaining the influence of innovative leadership on project performance through collaborative culture and team creativity.

For the present study, generally, only project-based organizations of Rawalpindi and Islamabad of Pakistan were approached. Seven project-based organizations were being approached and the data was collected. The projects core team members reported the data on self-governing variable (i.e., innovative management) and mediator (i.e., collaborative culture) whereas regarding the data on the dependent variable (i.e., performance of the project) and mediating variable (i.e., team creativity) remained reported by project manager which includes the project leaders, team leaders, and advisors/experts. However, support staff was excluded from this group. Self-administered questionnaires were distributed among the chosen organizations of Rawalpindi and Islamabad. Contestants have been already informed

that their information will remain personal and will be merely used regarding the academic devotions through the cover letter. They were requested to reply the questions as exactly as possible by ensuring the privacy of their responses and namelessness so the survey respondents don't feel shy to fill in the questionnaire conclusively. Almost 350 questionnaires were distributed to project managers and teams for data collection; however, 265 complete responses were received.

3.3 Sample Characteristics

For the current research, two questionnaires were designed. Supervisors filled questionnaires of team creativity, collaborative culture and project performance and the employees and subordinates of that supervisor filled the other questionnaire having innovative leadership. The demographics can be taken in this research are ; age of workers and project managers, their active understanding in the project-based organizations and information linked to gender and qualification. Sample characteristics are explained as follows:

3.3.1 Gender

Gender is a component, which can be on the forefront for the determination to maintain equivalence of the gender, so it is also contemplated as a significant component of the demographics. The reason is that it differentiates between males and females in a provided sample of the population. In the present research work, the efforts have been done to ensure the right of gender equilibrium but still it can be under observation that the proportion of male managers is significantly larger than the proportion of female managers.

TABLE 3.1: Gender Distribution

Gender	Frequency	Percent	Valid Percent	Cumulative Percent
Male	170	64.2	64.2	64.2
Female	95	35.8	35.8	100
Total	265	100	100	

Table 3.1, signifies the composition ratio of gender of the model in which 64.2% were recorded as male and 35.8% were female. The percentage of male respondents was high.

3.3.2 Age

Age is one of the significant demographics, in response to which respondents sometimes feel scratchy to declare it in an open form. So, regarding the comfort of respondents, scale/range was utilized to collect info regarding their age.

TABLE 3.2: Age Distribution

Age	Frequency	Percent	Valid Percent	Cumulative Percent
18 – 25	73	27.5	27.5	27.5
26 – 33	90	34	34	61.5
34 – 41	62	23.4	23.4	84.9
42 – 49	29	10.9	10.9	95.8
Above 50	11	4.2	4.2	100
Total	265	100	100	

Table: 3.2, reflects the arrangement of the model concerning the group of ages. 27.5% and 34.0% of defendants were having the range of an age of 18 - 25 years and 26 - 33 years. 23.4% of defendants were having the range of an age of 34 - 41 years, while 10.9% of respondents were having age from 42 - 49 years and just 4.2% of respondents were having the age of above thean 50 years. In the present research work, most of the respondents lie in the ranges of 18-25 and 26 - 33 years of age.

3.3.3 Qualification

Qualification is the significant element that can be involved towards the prosperity of the entire state and it can be considered as the requirement of the time to compete of the global level. Though, after the gender, the qualification/education can be considered as additional vital measurement of the demographics.

TABLE 3.3: Qualification Distribution

Qualification	Frequency	Percent	Valid Percent	Cumulative Percent
Matric	4	1.5	1.5	1.5
Intermediate	15	5.7	5.7	7.2
Bachelor	106	40	40	47.2
Masters	89	33.6	33.6	80.8
MS/M. Phil.	46	17.4	17.4	98.1
Ph. D	5	1.9	1.9	100
Total	265	100	100	

Table: 3.3, represents the qualification of the contestants, 1.5% were Matric qualified, 5.7% were Intermediate qualified, 40.0% were Bachelors qualified, 33.6% were Masters qualified, 17.4% were MS/M. Phil qualified, 1.9 % were Ph. D qualified. A large number of responded were having a Bachelor's degree.

3.3.4 Experience

To gather information of the experience of the respondents, also different varieties of experience periods were developed so that each defendants can easily indicate the specific time period of their experience in the related field of their project.

TABLE 3.4: Experience Distribution

Experience	Frequency	Percent	Valid Percent	Cumulative Percent
0 – 5	126	47.5	47.5	47.5
6 – 10	78	29.4	29.4	77
11 – 16	38	14.3	14.3	91.3
17 – 22	15	5.7	5.7	97
Above 29	8	3	3	100
Total	265	100	100	

Table: 3.4, represents that 47.5 % of the persons were having job expertise ranging from (0 - 5) years. 29.4 % of persons were having job expertise ranging

from (6 - 10) years, 14.3 % of persons were having job expertise ranging from (11 - 16) years, 5.7% of respondents were having job expertise ranging from (17 - 22) years, and 3.0% of respondents were having work expertise more than 29 years. Most of the respondents were lying in the work expertise of (0 - 5) years.

3.4 Instrumentation

3.4.1 Measures

This study consists of a closed-ended questionnaire adopted from different sources, which were used for measuring four variables. Questionnaires were managed to the numerous clusters of workers of the project-oriented companies that have been visited during the questionnaire distribution period. Questionnaires were also distributed online to the websites of project-based organizations for the quick response. Workers as respondents filled the survey forms with five sections in this research: demographic variables (gender, age, qualification, and experience), Innovative Leadership, Team Creativity, Collaborative Culture and Project Performance. The responses were tapped using a Lickert Scale of 5 points where 1 signifies strongly disagree and 5 represents strongly agreed unless otherwise stated. Questionnaires also covered demographic variables like Gender, Age, Qualification, and Experience.

350 forms were dispersed in aggregate but only 300 were received. But the real statistics of forms used for the examination of data for representative the results were 265. The rejected forms out of 300 forms were those which were not completely filled, or many of the questions were left incomplete in those forms, thus making them not appropriate for the research.

3.4.2 Innovative Leadership

Questionnaire for Innovative Leadership is constructed as portion of the Minnesota Innovation Survey to evaluate the group of innovation Leadership (Van de Ven &

Chu, 1989) and was employed by Lovelace, Shapiro, and Weingart (2001). The total items are 6. Item replies were coded using a 5-point Likert scale from 1, strongly disagree, to 5, strongly agree that tells the level regarding their team leaders (i.e., team leaders) showed the behaviour of leadership. Some of the items of the scale are e.g. The leader encourages initiatives.

3.4.3 Team Creativity

Questionnaire for Team Creativity is constructed by Sparrowe, Liden, Wayne, & Kraimer, (2001). Total items are 5, describing the extent to which teams meet established innovative and novel objectives. The responses will be tapped using a scale of 5-point Likert, where 1 signifies strongly disagree and 5 signifies strongly agree to measure the quality to which the team is responding to creativity in work. Some of the items of the scale are e.g. the team actively produces novel and useful ideas, “the team has produced many novel and useful ideas.”

3.4.4 Project Performance

Gu, Hoffman, Cao, and Schniederjans (2014), constructs a questionnaire for Project Performance. The total items are 8. The responses will be tapped using a scale of 5-point Likert where 1 signifies strongly disagree and 5 signifies strongly agree, to measure the extent to which project goals capability being exhibited by the staff. Some of the items of scales are e.g. Projects met expectations. Projects met budget requirements.

3.4.5 Collaborative Culture

The questionnaire for Collaborative Culture is constructed by Gopal, Anandasiyam, and Sanjay Gosain (2010). The total items are 3. The responses will be tapped using a Scale of 5 point Likert where 1 signifies strongly disagree and 5 represents strongly agree. The objects of the scale are: People in the project team

were supportive and helpful. “There was a willingness to share responsibility for success.” and “There was a willingness to collaborate across different groups.”

TABLE 3.5: Instruments

Variables	Source	Items
Innovative Leadership (IV)	Lovelace, Shapiro, and Weingart (2001).	6
Team Creativity (Med)	Sparrowe, Liden, Wayne, & Kraimer (2001).	5
Project Performance (DV)	Gu, Hoffman, Cao, and Schniederjans (2014),	8
Collaborative Culture MOD	Gopal, Anandasivam & Sanjay Gosain (2010).	3

3.5 Pilot Testing

In order to perform the experiment at huge level, it would be a very active and effective method to conduct the test at the pilot level, as it will discard many risks connected to depletion of possessions and time. It means that before administering a pilot study the researcher must be clear about the research topic, questions and research tools and techniques to re-evaluate them to look at how they will practically perform and if needed it can be adapted accordingly. Though the testing at pilot level, of almost 30 forms was carried out to validate, whether outcomes are acquainted and according to the proposed hypothesis or not. After the completion of small testing, it was summed up, that there is no specific issue in the variables and the scales were consistent for the pilot study directed.

3.6 Reliability Analysis of Scales Used

Reliability can be implied towards the process of giving the same consistent consequences over and over, when the specific item has been tested over several intervals, the similar is for the scales. The reliability of a gauge portrays the ability of the ruler to give consistent outcomes when it has been checked for several times. It

has been conducted a reliability test through Cronbach alpha, it tells regarding the internal reliability of the variables and informs regarding if those variables have a link between them or nor along with this it can also measures the solitary construct. The significant range for Cronbach alpha is 0 to 1 (Cronbach, 1951). The high worth of Cronbach alpha, the dependability of the ruler to measure the concept it can also implies towards the higher measurement. The reliable scale is considered when the worth of alpha above 0.7 and it is considered as less reliable in gauging the selected set of concepts when the value is below 0.7.

In **Table 3.7**, the Cronbach alpha scale can be utilized in the gathering of data. The standards of Cronbach's alpha for the variables below research are overhead 0.7. All the objects needing values 0.8 shows that these gauges are extremely dependable for utilization in the research in the perspective of Pakistan

TABLE 3.6: Scale Reliability and Validity Analysis

Variables	Cronbach's alpha (α)	Items
Innovative leadership	0.79	6
Team creativity	0.747	5
Project Performance	0.719	8
Collaborative culture	0.824	3

Table 3.7 shows the Reliability and Validity Analysis results after complete data collection. Value of Cronbach Coefficient Alpha regarding the Innovative management was 0.790, creativity of team was 0.747, and Project performance was valued as 0.719, Collaborative culture and was 0.824.

3.7 Data Analysis Techniques

For generating statistical results, different statistical tools and techniques have been utilizing in social sciences. These tools and techniques have some merits demerits, but the choice of accurate tests and tools is strongly linked with the research model, research purpose, research type and nature of data. To check

the links among variables researchers utilize correlation, to investigate the consequence of independent variables on dependent variables. Regression is use and process macros or structural equation modeling to experiment the links concerning multiple independent, dependent variables. After the gathering of data that is appropriate for the study from 265 respondents, the statistics was then analyzed on SPSS software version 20. Several processes while analyzing the data are used, such processes are given below:

1. Firstly, only the forms which were completed appropriately were selected for the investigation.
2. Every single variable of the form was code, and every coded variable can be utilized for analysis
3. tables of Frequency were used to clarify the sample features.
4. Statistics in descriptives forms were directed using numerical values.
5. The dependability of all the variables was tested through Cronbach's coefficient alpha.
6. Correlation analysis was done to know whether there is an important connection present between the variables in this research or not.
7. Single linear regression analysis of Independent and Dependent variables was done to analyze the proposed relationship.
8. Preacher and Hayes Process was utilized for arbitration and balance to regulate the presence of the role of mediator and moderator between the Independent and dependent variables.
9. Through correlation and Preacher and Hayes method, the intended hypotheses were tested to checked the refusal and receiving of the proposed suggestion.

Chapter 4

Data Analysis and Discussion

4.1 Descriptive Statistics

Descriptive Statistics including all the relevant variables such as innovative leadership, collaborative culture, creativity of team, and performance of the project comprehends the important points of evidence regarding the data and their standard values. It includes the total number of respondents, the maximum and minimum standards of each variable, moreover the means and standard deviations of each variable. The mean values demonstrate the average of responses while the standard deviation values indicate the differences of replies from their means. All the variables in the research were measured at a 5-point Likert scale. Descriptive statistics is the information summary of whole data because it highlights the significant statistic points. The given table presents some important informations that are representing the whole data.

TABLE 4.1: Descriptive Statistics

	N	Min.	Max.	Mean	Standard Deviation
Innovative Leadership	265	1	5	3.44	0.763
Team Creativity	265	1	5	3.41	0.747
Project Performance	265	1	5	2.81	0.573
Collaborative Culture	265	1	5	3.07	0.986

The descriptive statistic comprises basic particulars like the size of the population, minimum and maximum values, mean values and standard deviation values of the data. Descriptive statistics of the current data were given in Table 4.1. The first column of the table gives the details of the variables. Second, third, fourth, fifth and sixth columns inform about sample size, lowermost value, uppermost value, mean and standard deviation respectively.

Table: 4.1, displays that the sample size was 265 for all the four variables. All variables (Innovative Leadership, Team Creativity, Collaborative Culture and Project Performance) were rated on a five-point Likert scale, such as 1 demonstrating Strongly Disagree and 5 demonstrating Strongly Agree. Mean values and Standard Deviation values show the essence of responses. This is the respondents' observation regarding a particular variable. The mean value of the Innovative Leadership (IL) was 3.44 whereas the value of the standard deviation was 0.763. The mean value of Team Creativity (TC) was 3.41 whereas the value of the standard deviation was 0.747. The mean value of Project Performance (PP) was 2.81 whereas the value of standard deviation was 0.573. Finally, the mean value of Collaborative Culture (CC) was 3.07 whereas the value of standard deviation was 0.986.

4.2 Correlational Analysis

Generally, correlation analysis is carried out to determine the association among the variables. In this research work, the foremost objective to conduct correlation analysis is to find out the correlation between innovative leadership and project performance, the mediating role of team creativity and the moderating role of collaborative culture; to make the proposed hypotheses valid. Correlation analysis is conducted to know about the nature of variation between the two variables that if the variables vary together at the same time or not. Correlation analysis doesn't entail the relationship between two or more than two variables because it is different from the regression analysis.

In correlation analysis, Pearson correlation analysis tells about the strength and

nature of the relationship through Pearson correlation range i.e. from -0.1 to 0.1. Hence, through magnitude value, we can conclude the strength of the relationship between two variables and that magnitude value can generalize by the distance of correlation from zero. If the correlation is distant from zero that means the relation between the two variables is strong and vice versa. However, if the values are zero that straight means that there exists no relationship between the understudied variables. The positive and negative sign depicts the nature of the relationship. If the sign is positive that means an increase in one variable causes increase in the other variable and that is considered as direct relationship and in the same way, if the sign is negative that means that increase in one variable will cause a decrease in another variable and that would be an indirect relationship.

The below-mentioned table shows the correlation between the variables that are being studied under this study. Moreover, the values of correlation are depicting the nature and magnitude of the relationship between the variables.

TABLE 4.2: Correlation Analysis

Sr No.	Variables	1	2	3	4
1	Innovative Leadership	1			
2	Team Creativity	0.520**	1		
3	Project Performance	0.218**	0.190**	1	
4	Collaborative Culture	0.480**	0.574**	0.190**	1

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

$N = 265$, * $p < .05$; ** $p < .01$; *** $p < .001$ (IL =Innovative leadership, TC= Team creativity, PP= Project performance, CC= Collaborative culture).

Table: 4.2, presents the correlations for all theoretical variables. Innovative leadership was positively correlated with Team creativity ($r = 0.520^{**}$, $p < 0.01$), with project performance ($r = 0.218^{**}$, $p < 0.01$), and with Collaborative culture ($r = 0.480^{**}$, $p < .01$). Team creativity positively correlated with project performance ($r = 0.362^{**}$, $p < 0.01$), and with Collaborative culture ($r = 0.574^{**}$, $p < 0.01$). Project Performance was positively correlated with Collaborative culture ($r = 0.190^{**}$, $p < 0.01$).

4.3 Regression Analysis

To analyze the existence of a relationship between the variables, correlation analysis has been performed in the study, however mere reliance on the correlation analysis does not suffice because it just shows the existence of a relationship between variables through inadequate support and doesn't tell about the casual relationship amongst the variables. Therefore, regression analysis is executed to validate the dependence of one variable on another variable. Regression analysis depicts the extent to which one variable depends on another variable i.e. independent variable on which it is being regressed.

In this study, Preacher and Hayes (2004) methods have been used for both mediation and moderation regression analysis. Model 1 for moderation and Model 4 for mediation is used in Preacher and Hayes (2004) process; both for mediation and moderation are conducted separately.

TABLE 4.3: Regression of Outcomes

Predictor	Team Creativity			Project Performance		
	β	R ²	ΔR^2	β	R ²	ΔR^2
IV: Innovative Leadership	0.538***	0.271	0.268***	0.132***	0.49	0.46***
Med: Team Creativity				0.177***	0.116	0.112***

*Un-standardized regression coefficient reported. N = 265, * p < .05; ** p < .01; ***p < .001*

H1: Innovative Leadership and Project Performance

Table 4.3 indicates the results of hypotheses testing. First, we tested H1 that innovative leadership is positively associated with project performance. Results of regression analysis revealed that there is a positive and significant relationship existing between innovative leadership and project performance. The β co-efficient value is 0.132, R² = 0.46 with the p-value = 0.000. The value of R² shows the coefficient of determination whereas β value shows the rate of change demonstrating that 1 unit change in innovative leadership leads to 0.132 unit change in project

performance. The p-value of 0.000 indicates that the relationship is highly significant. Hence, Hypothesis 1 is accepted.

H2: Innovative Leadership and Team Creativity

In Hypothesis H2, we assumed that innovative leadership is positively associated with team creativity. The regression results of this hypothesis are given in Table 4.3. Results of regression analysis revealed that there is a positive and significant relationship existing between innovative leadership and team creativity. The β co-efficient value is 0.538, $R^2 = 0.271$ with the p-value = 0.000. The value of R^2 shows the coefficient of determination whereas β value shows the rate of change demonstrating that 1 unit change in innovative leadership leads to a 0.538 unit change in team creativity. The p-value of 0.000 indicates that the relationship is highly significant. Hence, Hypothesis 2 is accepted.

H3: Team Creativity and Project Performance

In Hypothesis H3, we assumed that team creativity is positively associated with project performance. The regression results of this hypothesis are given in Table 4.3. Results of regression analysis revealed that there is a positive and significant relationship existing between team creativity and project performance. The β co-efficient value is 0.177, $R^2 = 0.116$ with the p-value = 0.000. The value of R^2 shows the coefficient of determination whereas β value shows the rate of change demonstrating that 1 unit change in team creativity leads to 0.177 unit change in project performance. The p-value of 0.000 indicates that the relationship is highly significant. Hence, Hypothesis 3 is accepted.

4.4 Mediation Analysis Results

Hypothesis 4 assumed that team creativity plays a mediating role between innovative leadership and project performance. To test the mediation of H4 we used model 4 of PROCESS macro through SPSS by Hayes (2013). In which we checked different paths a, b, c and c' respectively. According to Preacher and Hayes process, there are total three effects that have to be ascertained: total effect, direct effect, an indirect effect.

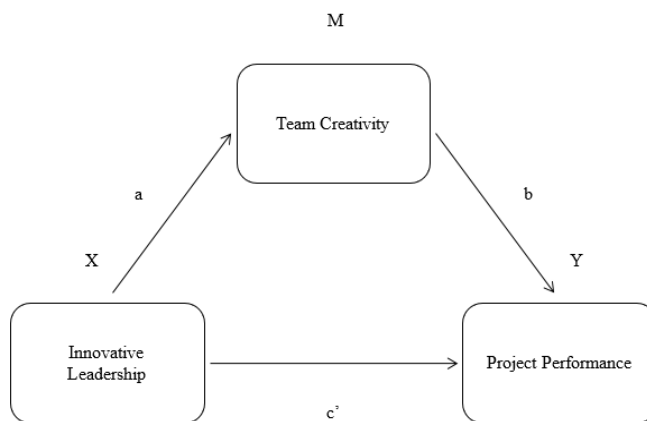


FIGURE 4.1: Mediation Analysis

TABLE 4.4: Mediation Analysis

Effect on IV on M (a path)		Effect of M on DV (b path)		The total effect of IV on DV (c path)		inDirect Effect of IV on DV (c' path)		Bootstrap Results for Indirect Effects	
t	β	T	β	t	β	t		LL 95 %	UL 95%
0.509***	9.86	0.261***	5.05	0.163***	3.62	0.031**	0.613	0.068	0.212

$N = 265$, * $p < .05$; ** $p < .01$; *** $p < .001$ Un-standardized regression coefficient reported. Bootstrap sample size was 5000. Confidence Interval = 95% $N = 265$, Control variables were, Gender, Age, Education and Marital Status, * $p < .05$; ** $p < .01$; *** $p < .001$ LLCI = Lower Limit Confidence Interval; ULCI = Upper Limit Confidence Interval

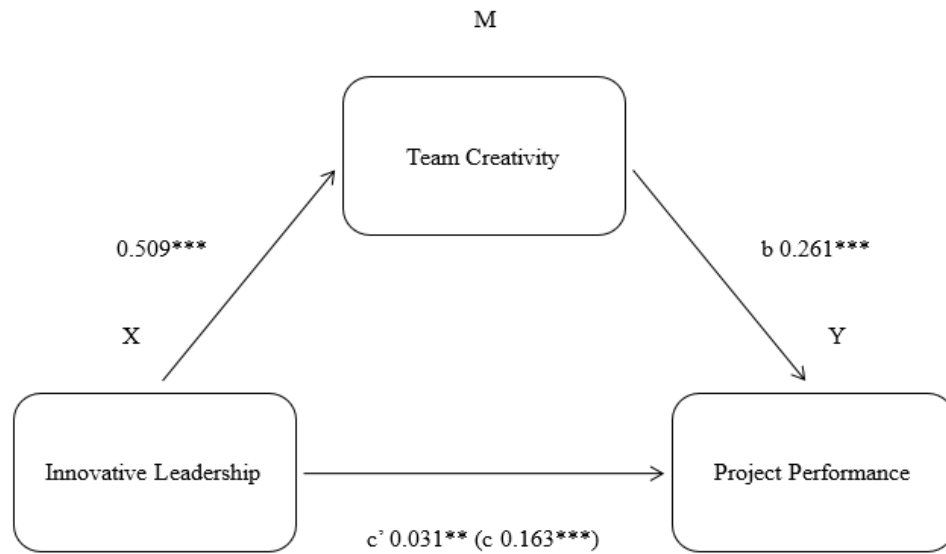


FIGURE 4.2: Mediation Analysis with Coefficients

Following is the explanation of every path:

Total Effect

The total effect demonstrates the effect of IV innovative leadership and DV project performance. The total effect of innovative leadership on project performance is 0.163 with the significance of $p = 0.000$. It indicates that approximately 16% variance occurs in project performance innovative leadership. The lower limit of bootstrap is 0.0750 while the upper limit is 0.2529, without having any zero between both limits. Hence, H1 is accepted that innovative leadership is positively associated with project performance.

Direct Effect

The direct effect identifies the effect of IV innovative leadership on DV project performance in the presence of mediator team creativity. In the presence of a mediator, the direct effect is 0.031 with a significant p-value of 0.000. It demonstrates that innovative leadership covers a 3% variation of project performance in the presence of team creativity. The lower limit of bootstrap is 0.0686 while the upper limit is 0.1306, without having any zero between both limits, which clarifies

that the results are significant.

Indirect Effect

The indirect effect identifies that mediation exists between IV and DV i.e. Team Creativity mediates the relationship between innovative leadership and project performance. The bootstrap values are predicting the significant results because there is no zero existing between lower limit i.e. 0.068 and upper limit i.e. 0.212. Therefore, the results are supporting the H4 and this hypothesis is accepted.

4.5 Moderation Analysis

To test the hypothesis H5 that states that collaborative culture moderates the relationship between innovative leadership and team creativity, we used model 1 of PROCESS macro through SPSS (Hayes, 2013).

TABLE 4.5: Moderation Analysis

Effect of IL on TC		Effect of CC on TC		Effect of IL x CC on TC		Bootstrap Results for Indirect Effects			
β	t	β	t	β	t	LL % IL	95 % IL	UL IL	95%
0.0786	0.6182	0.0813	0.5551	0.1078	2.4423	0.02		0.195	

*Un-standardized regression coefficient reported. Bootstrap sample size was 5000. Confidence Interval = 95N = 265, Control variables were, Gender, Age, Education and Marital Status, * $p < .05$; ** $p < .01$; *** $p < .001$.*

Table: 4.5, exhibits Moderation Analysis. Hypothesis 5 states, “Collaborative Culture moderates the relationship between Innovative Leadership and Team Creativity. The result show regression coefficients of Interaction Term (TC x CC) and Team Creativity as ($\beta = 0.1078$, $p = 0.0161$, $R^2 = 0.2070$). The finding shows that Collaborative Culture moderates between Innovative Leadership and Project Performance, the relationship is significant because the lower limit of bootstrap value is 0.020 and the upper limit value is 0.195, having the zero value between both limits. The result is shown in the table and explain the conditional effect.

4.6 Summary of Accepted/ Rejected Hypotheses

Table 4.7 illustrates the precise summary of results for the proposed hypotheses under this study.

TABLE 4.6: Hypotheses Summarized Results

Hypotheses	Statement	Status
Hypothesis 1	There is a positive association between Innovative Leadership and Project Performance.	Accepted
Hypothesis 2	There is a positive association between Innovative leadership and team creativity.	Accepted
Hypothesis 3	There is a positive association between Team creativity and Project Performance.	Accepted
Hypothesis 4	Team Creativity plays a mediating role between Innovative Leadership and Project Performance.	Accepted
Hypothesis 5	Collaborative Culture moderates the relationship between Innovative Leadership and Team Creativity.	Accepted

Chapter 5

Discussion and Conclusion

This chapter comprises details of the relationship of hypothesis and also their reasoning of acceptance and rejection and also discusses the theoretical implication, practical implication, strengths and weaknesses of the study and future research directions.

5.1 Discussion

Utilizing “Social Learning Theory” formulated by Bandura in 1977, the objective of the present study was to propose and test a model of innovative leadership on project performance in project-based organizations. For this purpose, data from project-based organizations in Pakistan was collected. As projected, the findings of the study were congruent with the hypothesized model. The research also studied the mediating effect of team creativity between innovative leadership and project performance. The moderating effect of collaborative culture between innovative leadership and team creativity is also studied in the research to know its relative impact combined with innovative leadership on project performance. The study was conducted in project-based firms having cultural diversity in the workforce. The preceding researches in the domain of innovative leadership and project performance are comprehensive encapsulating relevant aspects of the constructs (Rogan & Mors, 2014). Empirical researches on the literature of creativity suggested

that variables such as innovative leadership, performance, collaborative culture are important variables to study further and have a significant influence on the intertemporal choice problem (Wang, Luo, Maksimov, Sun & Celly, 2018) and organizational innovative performance (Heavey & Simsek, 2017).

The results of the study suggest that innovative leadership has a positive impact on project performance which means that innovative leadership of project managers enhances the novelty of the organization overall. There is a positive relationship between innovative leadership and team creativity, which further have a positive association with project performance. Therefore, H1, H2, H3, H4, and H5 are accepted developing a relationship between innovative leadership and project performance through the mediator of team creativity. This implies that innovative leadership positively enhances creativity in a team which enhances the project as well as organizational performance.

The study inculcated the variable of collaborative culture as a moderator. The data analysis on the variable in the contextual settings of Pakistan proves that collaborative culture climate positively influences the relationship between innovative leadership of the project manager and team creativity. The role of a collaborative culture climate was found to be significant and positively affecting the relationship between innovative leadership and team creativity.

The comprehensive discussion on each of the hypothesis is as follows:

5.1.1 Hypothesis H1: There is a Positive Relationship between Innovative Leadership and Project Performance

In Hypothesis 1, it was proposed that there is a positive relationship between innovative leadership and project performance. The results of the hypothesis ($\beta = 0.132$, $t = 3.68$, $p = 0.00$) proved the existence of a significant positive relationship between innovative leadership and project performance. The t value of 3.68 indicates the significant level of relationship between innovative leadership and

project performance, as the value is greater than 2 means that results are statistically significant. The β co-efficient is 0.132 which demonstrates that if there is a 1% unit change in innovative leadership then there is a likelihood that project performance will increase by 13% units.

Empirical studies in the domain of project management mostly consider innovative leadership as an important variable positively contributing to project performance as innovative leadership has self-confidence and capability for immediate control of the creativity. The hypothesis in this study assumed that innovative leadership has its self-confidence and future related high-level view of their team, the way he performs his task and the environment of his task accomplishment, has a very important and value able role for enabling his teams towards exploration (Morgeson et al, 2010). Halbesleben, Novicevic, Harvey, and Buckley (2003) suggested in their research paper that innovative leadership enhances the performance capabilities of individuals allowing them to exploit state of the art ways available to carry out operations and explore new creative ways to improve existing operations in a better way.

Innovation as a concept inculcates both exploitative and exploratory methods to ensure enhanced performance on organizational as well as individual levels. Performance on an individual level allows managers to exploit the existing competencies and explore new opportunities along with the creation of new knowledge (Taylor & Greve, 2006). The key element for reaching higher levels of project performance is to maintain innovation in it. Innovative leadership is one of the few important aspects contributing to allow individuals to maintain creativity. Whenever this appropriate balance is achieved between alignment and adaptability only then successful implementation of the projects can be ensured. Keeping in view the effects of globalization project performance is considered among the essentials required in ensuring the successful implementation and completion of projects (Lavie & Rosenkopf, 2006), along with innovative leadership in the domain of project management.

The project-based organizations of Pakistan entail innovative elements both on an organizational and individual level and the relationship of innovative leadership

and project performance is positively and significantly established as results of empirical testing of the hypothesis shows. The findings of the results support the positive relation of innovative leadership with project performance in the contextual settings of Pakistan.

5.1.2 Hypothesis H2: There is a Positive Relationship between Innovative Leadership and Team Creativity

In Hypothesis 2, it was proposed that there is a positive association between innovative leadership and team creativity. The results of the hypothesis ($\beta = 0.538$, $t = 9.87$, $p = 0.00$) proved the existence of a significant positive relationship between innovative leadership and team creativity. The t value of 9.87 indicates the significant level of relationship between innovative leadership and team creativity. As the value is greater than 2 means the results are statistically significant. The β co-efficient is 0.538 which demonstrates that if there is a 1% unit change in innovative leadership then there is a likelihood that team creativity would be increased by 53.8% units.

Existing literature available on innovative leadership and team creativity. Innovative leadership essentially encourages team members and empowers them to respond to unpredictable innovation for change without foregoing team benefit, which pushes them to enable team creativity. Under innovative leadership, team followers feel a strong intellect of a common aim and creativity (Algesheimer et al., 2011), which, in turn, augments their purpose of positively promoting the team. The aforementioned study shows that interactive competition could improve team creativity (Abuhamdeh and Csikszentmihalyi, 2009).

Team creativity plays a vital role in enhancing organizational performance especially when it comes to collectivist societies like that of Pakistan. Team creativity is categorized by aspects like decision-making, helpfulness, dependability, and attentiveness to the needs of others. Innovative leadership allows the project managers to act according to the demands of situations particularly, therefore, allowing better adaptability and creativity to increased project performance. The relationship

of innovative leadership and team creativity is positively and significantly established in project-based organizations of Pakistan as proved by the results of this study after empirical testing of the data.

5.1.3 Hypothesis H3: There is a Positive Relationship between Team Creativity and Project Performance

In Hypothesis 3, it was proposed that there is a positive association between team creativity and project performance. The results of the hypothesis ($\beta = 0.177$, $t = 4.53$, $p = 0.00$) proved the existence of a significant positive relationship between team creativity and project performance. The t value of 4.53 indicates the significant level of relationship between team creativity and project performance, as the value is greater than 2 means that results are statistically significant. The β co-efficient is 0.177 which demonstrates that if there is a 1% unit change in team creativity then there is a likelihood that project performance would be increased by 17% units.

The results of this hypothesis are supported by the findings of past researches that consider the element of team creativity as one of the critical factors for enhancing project performance (Parida & Ortqvist, 2015). Innovativeness allows project managers to implement exploitative and explorative practices simultaneously not only ensuring adaptability for creativity but also improvement and enhancement in performance both on an individual as well as a project level. A leader that is creative in thinking and adaptable to recent advancements is capable of motivating team members. The team members trust managers in return whom they find intelligently capable. The flexible creative capability of the team allows them to perform exceptionally as well as to enhance the performance of the organization (Elenkov & Manev, 2009).

The fact that projects are time-bound make it a necessity to have mechanisms that ensure successful and timely flexibility and improvement techniques to be applied according to the demand of circumstances (Davies & Brady, 2016). Project performance allows the team to make effective use of his exploitative and explorative abilities given the need for an hour making certain the successful implementation

and timely completion of the project. The project management literature available on critical success factors for projects considers flexibility and innovation as one of the important features contributing to project success. It also takes into account the fact that creativity is the element of modern project-based organizations thrive on. The paradigm shift towards globalization makes creativity and innovation important competitive edge organizations can have over competitors (Nikolova, Rodionov & Afanasyeva, 2017).

Project-based organizations when endeavor to develop new products or services require creativity on the organizational level through team creativity to ensure competencies required to complete projects within constraints and to maintain quality standards. The project-based organizational setup in Pakistan entails creativity and innovation element as the results of hypothesis suggests. The findings of the hypothesis establish a positive and significant relationship between team creativity and project performance based on data collected from project-based organizations in Pakistan.

5.1.4 Hypothesis H4: Team Creativity Plays a Mediating Role between Innovative Leadership and Project Performance

In Hypothesis 4, it was proposed that team creativity plays a mediating role between innovative leadership and project performance. This hypothesis has been accepted because results are demonstrating the significant relationship of team creativity as a mediator between innovative leadership and project performance. As the lower limit and upper limit 0.068 and 0.212 respectively indicated by the unstandardized regression coefficient are both positive and there is no zero existing in the bootstrapped 95% interval around the indirect effect of the relationship of innovative leadership and project performance through team creativity.

There is no research existing previously to study the mediating effect of team creativity concerning project performance in the domain of project management.

With the mediating effect, one should not overlook the implications of innovation leadership behavior to enhance team creativity as a finding that effectively enhances the performance of the organization. However, findings of the research conducted by Wang, Maksimov, Sun, and Celly (2018) indicate that innovative leadership significantly contributes to enhancing team creativity in completing the novel effect of the project. Inferences of the past literature also suggest that innovative leadership plays a vital role in enhancing the performance of an organization through the created team creativity, as innovative leadership and a diverse workforce is a repertoire of talents and expertise of various forms and kinds enhancing innovative and creative organizational performance.

The modern paradigm shift towards globalization makes innovative leadership a key human asset for both traditional and project-based organizations (Byrd and Turner 2001). Innovative leadership breeds team creativity allowing exploitative and exploratory mechanisms to be adopted both on individual and organizational levels and hence enhancing project performance. Projects, throughout their lifecycles, passes through a series of unforeseeable complexities be it a social or economic event, supply chain problems or unexpected external events. Projects are subject to inherent fluctuations of organizations in which they are being carried out. The uncertain nature of the projects calls for the inclusion of workforce asset which is innovative leadership. Such inclusions will lead to the development of creative capabilities for the team and hence the performance will also be enhanced both on the project and organizational level. The results of the hypothesis suggest that the relationship of innovative leadership and project performance is mediated through team creativity positive and significant in the project-based organizations of Pakistan.

5.1.5 Hypothesis H5: Collaborative Culture Moderates Positively the Relationship between Innovative Leadership and Team Creativity

In Hypothesis 5, the moderating effect of collaborative culture between the

innovative leadership and team creativity was studied. The results of Hypothesis 5 showed significant results. The analysis showed that there is significant effect of collaborative culture ($\beta = 0.1078$, $t = 2.442$, $p = 0.0161$). The value of $\beta = 0.1108$ predicts that collaborative culture is bringing change in the relationship between innovative leadership and team creativity. The t-value of 2.442 demonstrates that the relationship is highly significant because for a hypothesis to be significant t-value should be greater than 2. The lower and upper limits of 0.020 and 0.195 respectively indicated by standardized regression are having the same signs and zero exists in the bootstrapped 95% interval, which means the results are significant. Hence, the results are meeting the standards, statistically, this relationship is significant and the hypothesis is accepted. According to the results of the hypothesis, collaborative culture does moderate the relationship between innovative leadership and team creativity.

In this study, we explored the moderating effect of collaborative culture on the relationship between innovative leadership and team creativity. More specifically, the study was intended to prove that collaborative culture enhances team creativity capabilities of the innovative leadership of the project manager. The results of the hypothesis are significant and in our sample of study moderator of collaborative culture significantly affects the relationship of innovative leadership and team creativity.

Previous studies have established the significant impact of collaborative culture on the relationship of innovative leadership and team creativity (Stavros & Cole, 2015). Moreover, it enhances the creative capabilities of the innovative leadership of the project manager. Collaboration is an indispensable feature in leveraging team creativity and project managers are observing for approaches to escalate collaboration amongst their teams (Cole, Cox & Stavros, 2016). Collaboration among team culture enhanced using positive and active swapping of knowledge (Shaw & Lindsay, 2008). Therefore, the growing literature on innovative planning and thinking allows members to construct the future through cultural collaboration and shared commitment (Stavros & Cole, 2013). Duffy & Fearne (2004) have established that collaborative relationships help the team members to effectively

manage projects and involve in planning and decision making flexibly to elevate the link between the leader and the team.

In conclusion, collaborative culture influences team creativity. In the contextual settings of Pakistan, it is important to put light on these distinctive actualities. The data suggest that team culture of project teams mostly has a collaborative attraction for the members sharing different values and beliefs, therefore positively affecting the group performance altogether which in return affects the creative capabilities of the team under the innovative leadership of project manager positively. In project-based organizations of Pakistan, as the results of the hypothesis suggests that patterns of team creativity prevail when it comes to a collaborative culture.

5.2 Practical and Theoretical Implication

This study did very momentous contributions in the past literature in both ways, theoretically and practically. The study has contributed to the literature of variables like innovative leadership, team creativity, collaborative culture, and project performance. There is very limited literature available on innovative leadership highlighting the organizational issues emphasizing its role in the domain of project management. Our findings indicate that with the help of strong innovative leadership we can see a major improvement in project performance. This is a very significant contribution to literature since previously there is less research available that is highlighting it in organizational perspective within the contextual settings of Pakistan in the domain of project management.

The study illustrates very significant actualities by identifying the influence of innovative leadership on project performance in the context of Pakistan, where leadership is considered an important yet sensitive instrument in streamlining efforts to enhance team creativity. In collectivist societies like that of Pakistan culture is an important element of individual life and organizational setup. It influences strongly one's beliefs, values and everyday interactions. In such societies innovation is an important element ensuring success as it allows individuals to adapt and

align favorable change towards creative and structural team conscious (Bolman & Deal, 2017). It is identified through the study that innovative leadership significantly enhances project performance. It allows the project manager to adapt to novel settings and to deal with intertemporal conflicts that enhance creativity in the project team, in a way to motivate them to work effectively and as a result enhanced project performance is achieved.

The additional very significant theoretical contribution is the role of team creativity as a mediator between innovative leadership and project performance, which is not acknowledged in the literature before. Previous literature available on creativity is not in the project management context and also innovative leadership and project performance have identified other mediators in the relationship but team creativity has never been introduced not in the relationship nor as a mediator before. The results of the study demonstrated that innovative leadership increases the creative capabilities of the project team that leads to enhanced project performance. As innovative leadership and team creativity are important and distinctive variables in the domain of project management, so analyzing these variables in the contextual settings of Pakistan comes out as a unique research, which has contributed significantly to the literature.

Moreover, this research also studied the moderating role of a collaborative culture in the relationship between innovative leadership and team creativity. The results of the study suggested that collaborative culture positively moderates the relationship between innovative leadership and team creativity in the contextual settings of Pakistan. This too is a significant theoretical contribution to the literature. Organizations along with project managers should inculcate proper mechanisms to improve the effects of collaborative culture as it significantly influences the potential future and long-term viability of the organization in the context of performance and success.

This study is equally important in the practical business world. In this age of modernization where the world is moving rapidly towards globalization, innovative leadership along with team creativity is considered one of the significant aspects in defining potential future and long term viability of project-based organizations

in the context of project performance and success. This research is helpful for project-based organizations in a way that it provides insights on how innovative leadership enhances project performance through team creativity, for a system to be adopted in a way that it ensures success on both organizational and project level.

5.3 Limitations of Research

While conducting the study it is tried to eliminate and overcome flaws but still, there are always few limitations in research as it is not possible to cover all aspects in one study. By adding some well-informed evidence in the literature, few research gaps have been filled by the current research. On the other hand, because of time and resource constraints, there are some other limitations associated with this study.

The study is directed only to the project-based organizations of Pakistan and the results may not be generalized to other sectors. Only one mediator and one moderator were tested due to time constraints. However, future research can expand the model and check the other mediators as well.

The small sample size is another limitation of the study and the reason behind this limitation is that data is collected in a very short time. Data was collected from only projectized organizations from the construction sector operating in Islamabad and Rawalpindi so it might not represent the whole culture of Pakistan, whereas employees working in different cities exhibit different behavior due to environment and other geographical changes.

Additionally, we use a convenience sampling method and choose the sample which was easily reachable to us. Due to convenient sampling and data collected from the few organizations, the results of the present study cannot be generalized for the projectized organizations that are not engaged in such collaborative activities. The results are different because of strong situational factors as well as Pakistani culture has a strong impact and results cannot be generalized to other countries.

5.4 Future Research Directions

There is always some space in everything, which gives future directions. This research opens abundant novel opportunities for future researches. There are some suggestions regarding current research on which research should be conducted in the future. In this study, we empirically tested the influence of innovative leadership on project performance on the other hand in the future, researchers can examine the impact of innovative leadership on the organization through different project related variables i.e. organizational ambidexterity. The current study gives a way forward to the researchers to inspect and duplicate the model in organizations other than project-based organizations to inspect the effect with large sample size.

Moreover, the relationship between innovative leadership and project performance can be studied with other mediating variables. Future researches can also focus on the moderating role of other variables like situational and personality factors between the relationship innovative leadership and team creativity. Together with there is also sufficient room vacant to explore multiple conditional factors that can affect these relationships. Team creativity is the novel variable in the domain of project management that can be studied and empirically tested in other relationships both on an individual and organizational level. We sanction the further research to pay thoughtfulness on the methods of data collection methods because this study has some drawbacks. The outcomes and implication of the study will be helpful for future research that mainly focus on this area for linking innovative leadership to various other variables like team creativity. Also, the sample size can be widened, as this study is just limited to a certainly accessible sample. Hence, forthcoming researches perhaps can incorporate these guidelines.

5.5 Conclusion

The practice of project management is accepting a lot of responsiveness from researchers and academicians. Keeping in view, the present-day study has taken a

significant concept namely innovative leadership and established it in the context of project-based organizations. This study is directed to improve the domain of innovative leadership and project performance, which are very popular fields and has great implications in the present era. This study has attempted to consider the relationship between innovative leadership and project performance in project-based organizations of Pakistan. Data was collected from project-based organizations (construction firms of Rawalpindi and Islamabad) of Pakistan through a questionnaire study to measure the extent to which innovative leadership impacts project performance with the mediating role of team creativity and moderating role of a collaborative culture.

Altogether 350 questionnaires were dispersed however, only 265 were used for analysis since these questionnaires were having the most suitable and comprehensive information required for carrying out the analysis of this study. Statistical tests indicate that the validity and reliability of the model variables and fit of the model are also suitable. The proposed hypotheses are also supported through social learning theory. The data analysis outcomes in the acceptance of all hypotheses.

This study contributes to the existing literature of innovative leadership and team creativity because there is very limited literature available about the variables in the domain of project management. Moreover, this study majorly contribute to the previous literature by identifying the different mediator of team creativity between innovative leadership and project performance. This study has given an all-inclusive view of the impact of innovative leadership on project performance along with team creativity as a mediator strengthens the positive impact in project-based organizations of Pakistan. The current study not only offers several theoretical and practical implications but also opens new avenues for research.

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Appendix-A

Questionnaire

Dear Respondent

I am a student of MS Project Management Capital University of Sciences And Technology, Islamabad, I am conducting a research on the topic: “**Impact of Innovative Leadership on Project Performance, with the Mediating Role of Team Creativity & Moderating Role of Collaborative Culture**”. You can help me by completing the attached questionnaire. I appreciate your participation in my study and I assure that your responses will be held confidential and will only be used for education purposes.

Sincerely,

Faisal Jamshed,

MS Scholar,

Faculty of Management and Social Sciences,

Capital University Science and Technology, Islamabad.

Section 1: Demographics

Gender	1- Male 2- Female
Age(years)	1 (18-25), 2 (26-33), 3 (34-41), 4 (42-49), 5 (50-above)
Qualification	1 (Matric), 2 (Inter), 3 (Bachelor), 4 (Master), 5 (MS/M-Phil), 6 (PhD),
Experience(years)	1 (0-5), 2 (6-10), 3 (11-16), 4 (17-22), 5 (23-28), 6 (29 and above)

Section 2: Innovative Leadership

Please tick the relevant choices: 1= Never, 2= Rarely, 3= Occasionally, 4= A moderate amount, 5= A great deal

1	The leader emphasizes teamwork.	1	2	3	4	5
2	The leader clarifies individual responsibility.	1	2	3	4	5
3	The leader provides clear feedback to the employees.	1	2	3	4	5
4	The leader emphasizes task orientation.	1	2	3	4	5
5	The leader encourages initiatives.	1	2	3	4	5
6	The leader trusts the employees.	1	2	3	4	5

Section 3: Collaborative Culture

Please tick the relevant choices: 1= Never, 2= Rarely, 3= Occasionally, 4= A moderate amount, 5= A great deal

1	People in the project team were supportive and helpful.	1	2	3	4	5
2	There was willingness to share responsibility for success.	1	2	3	4	5
3	There was willingness to collaborate within different groups.	1	2	3	4	5

Section 4: Team Creativity

Please tick the relevant choices: 1= Never, 2= Rarely, 3= Occasionally, 4= A moderate amount, 5= A great deal

1	Project team has produced many novel and useful ideas (services/products).	1	2	3	4	5
2	Project team fosters an environment that is conducive to our own ability to produce novel and useful ideas (services/products).	1	2	3	4	5
3	Project team spends much time for producing novel and useful ideas (services/products).	1	2	3	4	5
4	Project team considers producing novel and useful ideas (services/products) as important activities.	1	2	3	4	5
5	Project team actively produces novel and useful ideas (services/products).	1	2	3	4	5

Section 5: Project Performance

Please tick the relevant choices: 1= Never, 2= Rarely, 3= Occasionally, 4= A moderate amount, 5= A great deal

1	Projects are completed on time.	1	2	3	4	5
2	Projects met budget requirements.	1	2	3	4	5
3	Projects met expectations.	1	2	3	4	5
4	Project team members are satisfied to work together.	1	2	3	4	5
5	Benefits of projects to the organization are high.	1	2	3	4	5
6	Projects resulted in sales growth.	1	2	3	4	5
7	Projects helped the organization to increase market share.	1	2	3	4	5
8	Projects helped the organization improve its competitive position.	1	2	3	4	5