

CAPITAL UNIVERSITY OF SCIENCE AND  
TECHNOLOGY, ISLAMABAD



**The Impact of Shared Leadership  
on Team Effectiveness, in Project  
Teams, with Mediating Role of  
Trust and Moderated by Project  
Team Commitment**

by

**Irum Younis Khan**

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

in the

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Department of Management Sciences

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*I dedicate this work to Mr. Ahmed Tauqir for being source of my courage to be  
what and where I am today in life.*



## CERTIFICATE OF APPROVAL

**The Impact of Shared Leadership on Team Effectiveness,  
in Project Teams, with Mediating Role of Trust and  
Moderated by Project Team Commitment**

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Someone asked the Prophet, “Who is the biggest scholar?” He replied: “He who is constantly trying to learn from others, for a scholar is ever hungry for more knowledge”. I am thankful to Allah subhana-watallah who has blessed me with a never satisfying thirst for seeking knowledge. Alhamdulillah.

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## *Abstract*

This study evaluates the relationship of shared leadership and project team effectiveness with trust as mediator and project team commitment as moderator in order to understand the effects of variables to enhance project team performance and effectiveness of project teams working in Pakistan. The data was collected from 308 respondents working in team environment preferably in project based organizations via online survey. The results of this study confirmed that shared leadership has a strong positive impact on team performance in project management teams whereas trust enhances and strengthens the relationship by playing a vital role as mediator. Meanwhile team commitment does not moderate relationship between shared leadership and team effectiveness already built and established on strong foundations of trust among team members. The study contributes to improve the and boost the processes by adopting better work practices in project team environment, working within geographical boundaries of Pakistan, to achieve the desired objectives within time and cost constraints in most efficient manner.

**Keywords: Shared Leadership, Trust, Team Effectiveness, Team Commitment, Project Teams, Project Management.**



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# Abbreviations

<b>DV</b>	Dependent Variable
<b>IV</b>	Independent Variable
<b>LLCI</b>	Lower Level Confidence Level
<b>SL</b>	Shared Leadership
<b>TCM</b>	Team Commitment
<b>TEF</b>	Team Effectiveness
<b>ULCI</b>	Upper Level Confidence Level

# Chapter 1

## Introduction

### 1.1 Background of the Study

Technological revolution, advancements in communication, globalization and modern trends in work environments have encouraged the organizations to adapt their organizational structures suitable for project environments where teams are formed temporarily, bound with constraints of time, cost and required quality, to achieve certain objectives in most efficient and effective manner. According to PMBOK, projects are temporary in nature, as they are time bound and have a unique objective to achieve, where a set of experts come together in temporary setting to work together to achieve a certain objective successfully.

Project-based working is getting popularity in global organizations which are building their portfolios as project based organizations. Project Based Organizations (PBOs) are replacing the functional and matrix organizational structures, diminishing the bureaucracy inside the organizations and encouraging collaborative efforts through team work as the measure of success is the final result only. In a standard project based environment, a Project manager holds the responsibility for achieving the desired objectives of the project, bearing a strategic role, while satisfying needs of not only the task itself but also of the team as well as individuals.

Studies in the field of project management have emphasized the need of further research and implementation of effective strategies and practices within project processes as well as project teams to high degrees of outcomes and success as per set criterion of three parameters of time, cost and performance.

Leadership is one of the crucial elements for team performance and effectiveness (Cohen & Bailey, 1997; Hackman & Walton, 1986; Kozlowski, Gully, Salas, & Cannon-Bowers, 1996), and some researchers have even argued that leadership is the most critical ingredient for optimum team performance (Sinclair, 1992; Zaccaro, Rittman, & Marks, 2001). The leadership research and theory has been typically focused on formal singular, appointed or elected leaders in latter 20th century (Bass & Bass, 2008) but in recent times, the perspective has shifted towards a more broader view of depiction of leadership as an influential process within organizations where one appointed individual to be the leader plays only a part in achieving the required objectives (Day & Harrison, 2007; Mehra, Smith, Dixon & Robertson, 2006) whereas team effectiveness can be enabled through significant contribution of other members through informal leadership (e.g., Pearce & Sims, 2002).

Highly competitive and dynamic work environments in project-based organizations have resulted in emergence of varying leadership styles and behaviors among teams, to achieve the required objectives in most effective and efficient manner and high team performance. Within the context, leadership has been transitioned from concept of a solitary leader to the team (Paster, Meindl, & Mayo, 2002) to the emergence of a collective form of leadership named as Shared leadership (Pearce & Conger, 2003) for effective team management. This new construct has shifted the attention of organizations from a more command and control based leadership hierarchical models to a model which allows team members to apply their skills in interdependent work environment with more autonomy bestowed upon the team members in horizontal relationships rather than to a single vertical leader.

This perspective towards leadership and influence ignited in the view of many researchers after publication of Pearce and Conger's (2003b) insightful chapters on



shared leadership, topic of shared leadership caught interest and became subject of considerable scholarly activity.

Shared leadership, also known as collective or distributive leadership, is defined as a dynamic interactive influence process among individuals in groups, for which objective is to lead one another to achieve group goals or organizational goals or both (Pearce & Conger, 2003, P. 1). It allows the team members to share responsibility within a formal or informal team structure (Yammarino, Salas, Serban, Shirreffs, & Shuffler, 2012). In shared leadership teams influence and responsibility are distributed among team members or by the team leader with team members (Barnett & Weidenfeller, 2006, p. 6).

Although the primary focus of research in previous years was based on finding direct relationship of distributive or shared leadership with team performance and team effectiveness but it has been observed that the relationship is more complicated than simply direct effects relationship (Hoch, Pearce, & Welzel, p. 113, 2010) highly moderated by certain variables such as the study that shared leadership connects more strongly with attitudinal outcomes and behavioral processes and team emergent states than with actual team performance (Wang, Waldman, & Zhang., 2014). Prior studies have been able to identify various unconventional types of shared leadership as alternatives, such as shared visionary leadership (e.g., Pearce & Ensley, 2004), shared authentic leadership (e.g., Hmieleski, Cole, & Baron, 2012) and cumulative shared leadership (Carson, Tesluk, & Marrone, 2007) but in this study, we have focused on shared leadership as a whole and its overall effect of project team effectiveness although the variation in type of shared leadership being practiced within team may affect the strength of relationships with the variables and constructs.

The positive relation between shared leadership and team performance has been studied and documented in a number of researches and meta-analysis highlighting importance of shared leadership in team processes and functions along with its relation to team outcomes (Carson et al., 2007; Hoch, 2013; D-Innocenzo, Mathieu, & Kukenburger, 2014) although the strength of the relationship varied with shift

of focus while analyzing the relationship through different mediating and moderating variables. Thus a better understanding of the behavioral and contextual variables that influence team effectiveness through shared leadership needed to be studied in order to find measurement tools and methods to assess the processed and effectiveness of shared leadership (DInnocenzo et al., 2014; Wang, Waldman, & Zhang., 2014) also many researchers have stressed the need to explore the variables that have moderating effect on shared leadership (e.g. Fitzsimons, James, and Denyer, 2011; Hoch et al., 2010).

This study contributes to the literature firstly by examining the relationship between shared leadership and its effects on team effectiveness and how important it is to understand the concept of shared leadership in order to gain maximum level of output from team members bearing different kind of skills and expertise. Secondly the mediating role of trust to strengthen and weaken the aforesaid relationship is studied as a behavioral construct in view of previous studies. Thirdly team commitment is explored as a moderator as not much is studied on it as a moderator between shared leadership but as one of the elements to enhance trust among team members.

The need for further research on variables (quantitative/qualitative) acting on the impact of shared leadership over team dynamics and performance has been pointed out by researchers over time. The whole idea of shared leadership is new in organizational structure of Pakistan and it has not gained acceptance or popularity as it is opposed to the traditional concept of hierarchical leadership where single leader has sole autonomous power over team which reflects the basic notion of the prevailing culture. This study will give a positive view of adopting the shared leadership style in projects to achieve high team performance as trust plays its part to enhance the performance where team commitment is at power to achieve desired goals successfully as it empowers the team members by giving every competent member a chance to prove their owcapabilities which provides a source of motivation for increased commitment.

## 1.2 Research Gap

The general focus of literature in project management domain has been set on centralized power held by a person who holds the chair of vertical leadership. A single project manager has been thought to bear all responsibilities for a project and act as a sole vertical leader (Zhang, Chao, & Wang, 2018; Aga, Noordenhaven & Vallejo, 2016). The fact that every individual with the right skill and knowledge is a leader in his own domain and sphere is being recognized by modern organizations (Singh & Jampel, 2010). Although shared leadership has been studied in multiple management domains and its positive impact on team processes has been established in research as well in management practices yet its impact on temporary formed project teams in project management has not been studied much (Young, Gregory, & Grisinger, 2019). Thus, how multiple leaders, in shared leadership environment of project teams, influence groups of followers has not yet been explored much. Recent researches have emphasized that in leadership processes, the importance of we must be focused (Yammarino et al., 2012).

More specifically there are few studies in which relation between team effectiveness and shared leadership has been tested empirically (Perry, Peace, & Sims, 1999). Moreover, with multiple ongoing and expected projects in Pakistan due to CPEC, it is very important to analyze how leadership styles can affect the team effectiveness as traditionally, managers in Pakistan use a traditional vertical leadership style with hierarchical structures meanwhile team-based work environment has not been promoted broadly.

Another important aspect is that the positive relation between shared leadership and team effectiveness has been documented in a number of researches which stress on significance of shared leadership in relation to team outcomes within team environments (Carson et al., 2007; Hoch, 2013; D’Innocenzo et al., 2014) although the strength of the relationship varied with shift of focus while analyzing the relationship through different mediating and moderating variables. Thus a better understanding of the behavioral and contextual variables that influence team effectiveness through shared leadership needed to be studied in order to find

measurement tools and methods to assess the processed and effectiveness of shared leadership (DInnocenzo et al., 2014; Wang et al., 2014) also many researcher have stressed the need to explore new moderators of shared leadership (e.g. Fitzsimons et al., 2011; Hoch et al., 2010).

### **1.3 Problem Statement**

As project based organizations are gaining popularity with limited time frame and finances, there is need to explore various constructs and leadership styles which can help the project teams adopt for optimum performance and to achieve the ultimate objective of project success. The whole idea of shared leadership is new in organizational structure of Pakistan and it has not gained acceptance or popularity as it is opposed to the traditional concept of hierarchical leadership where single leader has sole autonomous power over team which reflects the basic notion of the prevailing culture.

The problem of this study is to gauge the impact of shared leadership on team effectiveness, in project teams, with mediating role of trust in a team being moderated by members commitment to the team. This quantitative research study will explore the horizontal leadership styles being adopted in project teams of Pakistan based organizations and effectiveness of shared leadership within teams. The data to be gathered in the study may provide project managers and leaders with the information relating to the ways to achieve high efficacy of project teams by using shared leadership to be encouraged in project team environments to get most out of the members skills and abilities and keep the motivation level of team high by strengthening the trust among each other while developing a shared vision.

### **1.4 Research Questions**

1. What is the impact of shared leadership on team effectiveness in project teams?

2. To what extent the team commitment plays a role in team effectiveness in shared leadership environment?
3. Does trust have any impact on team effectiveness?
4. How does trust effect team commitment level for gaining more effectiveness?

## 1.5 Research Objectives

- To find out the relationship between shared leadership and team effectiveness.
- To find out relation between shared leadership and team trust in project teams.
- To find the relation between team trust and team effectiveness in project teams.
- To find the impact of Trust as a mediator between shared leadership and team effectiveness.
- To find out moderating effect of Team commitment on relationship among shared leadership and team effectiveness mediated by trust.
- To find out the relationship between shared leadership and team effectiveness.
- To find out relation between shared leadership and team trust in project teams.
- To find the relation between team trust and team effectiveness in project teams.
- To find the impact of Trust as a mediator between shared leadership and team effectiveness.
- To find out moderating effect of Team commitment on relationship among shared leadership and team effectiveness mediated by trust.

## 1.6 Significance of the Study

This study will give a positive view of adopting the shared leadership style in projects to the project project-based organizations in Pakistan, with each focus on importance of effective horizontal leadership than the conventional vertical leadership to achieve high team effectiveness leading to optimum performance as trust among the team members along plays its part to enhance the commitment of team members gaining higher degrees of work effectiveness of project team to achieve desired goals successfully.

Currently, there is a dire research need for Pakistan, being at a developmental stage for project-based work environment, to find out the best suited work practices that can help lift the project success rates to encourage the international stakeholders to work in the country. With CPEC infrastructure being an integral part of shaping its future economical scenarios, Pakistan is expecting projects of multiple variances initiated in future for which the best practices in project team environments need to be explored and adopted.

The need for further research on variables (quantitative/qualitative) acting on the impact of shared leadership over team dynamics and performance has been pointed out by researchers over time. This study will give further insight on team dynamics in shared leadership with focus leadership process in horizontal settings rather than vertical organizational settings as it is the need of time especially in context of project-based organizations working in Pakistan. Thus the study will not only serve project management literature by adding an amount of research in domain of shared leadership but will also help practitioners focus on modifying their strategies in enhancing their performance and providing them evidences for areas of improvement within the context of the organizational culture of Pakistani project-based organizations.

The breakup of the current study comprises of five chapters: Chapter 2 gives a literature review of the variables being focused on, for the current study, along with theoretical support as the references to the previous researches and studies along with meta-analysis in the field will build strong foundations for the current

study of shared leadership and its moderators and mediators to gain gauge team effectiveness. Chapter 3 comprises of information about research methodology used for data collection, data sampling, data analysis tools and techniques while chapter 4 bears the results with statistical tests and tables calculated using the data analysis tools. In chapter 5, the results are discussed in relation to deduced hypothesis and recommendations will be made with mention of study limitations along with the suggestions for the future research in the area.

## **1.7 Supporting Theory**

### **1.7.1 Social Identity Theory**

The connection between shared leadership and team effectiveness can be better understood with help of social identity theory of leadership (Hogg, 2001). This theory suggests that with increase in group membership, the group members identify more strongly with the group and “effective leadership rests increasingly on the leader being considered by followers to possess prototypical properties of the group” (Hogg, van Knippenberg, & Rast, 2012, p. 264). The main idea is that the team members support and trust group prototypical leaders and members strongly identify with the group when group membership is a salient aspect of team members identity within the team environment. Hogg (2001) argued that proto-typicality could apply to group or team members and is not restricted to formal leaders only. The extent of the proto-typicality of a leader is broadened through shared leadership as in shared leadership settings, team members get their turns on taking up the leadership role. Being a prototypical leader becomes a part of members social identity of the members of the team as strong influence of shared leadership practices within team enables the inherent acceptability of prototypical role of a leader by the members. Higher levels of trust within a team broadens the leader proto-typicality as trust within team builds over a significant time period, and members start to show high team commitment by behaving in a manner that better serves interests of the team. (Hogg, 2001; Hogg et al., 2012).

# Chapter 2

## Literature Review

### 2.1 Shared Leadership and Project Team Effectiveness

Previously, the study of leadership types and processes and their relation to team effectiveness and team performance has been revolving around leadership of single leaders (Gronn, 2002) but the concept of leadership, with evolving team structures, has changed. Gibb (1954) originally suggested that leadership in teams may be either in the form of distributed leadership, where more than one individuals in team setting share the leadership role, or in the form of focused leadership where a single leader holds the responsibility of all the team processes. In teams where leadership influence is distributed, team members are not only acting as leaders for certain team functions but they also respond to leadership of other team members who bear expertise in different areas needs at different points of projects life cycle. This reciprocal influence among team members to work towards achieving project objectives is termed as shared leadership. Kozlowski and his colleagues proposed a team leadership theory suggesting that although a single leader holds the overall responsibility of team functions yet the task cannot be accomplished by him alone. The team members must assume leadership roles during task progression and development thus enabling an environment of to share leadership within teams according to the nature of tasks (Kozlowski, Gully, Nason & Smith, 1999).



Shared leadership has been called distributed leadership or rotating leadership by researchers who have found that there may be an association between superior team performance and certain forms of distributed leadership structures relative to traditional leader-centered structures (Mehra, Smith, Dixon, & Robertson, 2006). The processes of influence are emphasized and required within upward and downward hierarchical structures, in traditional leadership forms, whereas in shared leadership, peer and lateral influence is more of a focus of emphasis. Within highly developed team, the shared leadership practices are viewed as manifestation of transformational leadership at the group level. (Avolio, Jung, Murry, & Sivasubramaniam. 1996) where team members not only claim their leadership roles but also grant leadership recognition to other team members thus Sharing the identities of being a leader with peers thus leading and following their peers simultaneously (DeRue, 2011).

Positive influence of shared leadership on team performance, in comparison to vertical leadership, has been demonstrated and reported by many studies arguing it to be a better predictor of team performance (Ensley, Hmieleski, & Pearce, 2006; Pearce & Sims, 2002). Team effectiveness has been identified as one of the key elements of team performance as the ability through which a team can improve its different facets over a certain time period (Hackman, 1990). Apart from finding out ways to manage teams to be more effective (e.g. Hackman 1987), researchers have focused on manipulating team tasks and building self managed teams (Langfred, 2004; Man and Lam, 2003) to improve team effectiveness. Studies also show that higher levels of team effectiveness and performance are yielded through shared leadership as compared to traditionally adopted and practiced hierarchical leadership structures (Avolio et al., 1996; Carson, Tesluk, & Marrone, 2007; Perry, Pearce, & Sims, 1999). Power differences are reduced through shared leadership as important leadership roles are shared and connection is enhanced among team members. (Pearce & Manz, 2011) thus posing the fact that shared leadership is more predictive of team performance as compared to vertical hierarchical leadership (Pearce & Sims, 2002; Ensley, Hmieleski & Pearce, 2006). The generalized evidence of correlation of shared leadership with team effectiveness is

measured, ranging between 0.21 and 0.35, in the recent meta-analysis on shared leadership, its relationships and different mediators and moderators affecting it (DInnocenzo et al., 2014; Nicolaidis, LaPort, Chen, Tomassetti, Weis, Zaccaro, & Cortina, 2014; Wang et al., 2014).

As it has been observed and recorded that team members share more information, bring more resources and show commitment with the team when offered leadership (Katz & Kahn, 1978), we believe that a positive relation between shared leadership with team effectiveness will be observed through our study because the reciprocal influential process in horizontal leadership builds trust and respect among the team members and improves their coordination resulting in higher level of team performance and effectiveness.

*Hypothesis I: Shared leadership in project teams is positively related to the team effectiveness.*

## **2.2 Shared Leadership and Trust**

Though trust has been defined through multiple definitions, conceptually, the beliefs and expectations of a person that makes him rely upon words or an action of another person is called trust (Cummings and Bormiley, 1996; Robinson, 1996; Rousseau, Sitkin, Burt and Camerer, 1998; Dirks 1999). At the level of group or team, it is shared attitude among group members and is directed toward the collective (Simons & Peterson, 2000). The shared belief of readiness of team to take interpersonal risks is termed as team trust (Edmondson, 1999), while in order to achieve the settled goals, trust acts as meaningful concept that enhances the team capability (Bass, 1990). Being the belief upon which the performance of the teams relies, Trust is considered as the main referent among the team members. It must be noted that although variety of beneficial outcomes may be brought out through trust (Dirks and Ferrin, 2001) yet just like excess of anything is never beneficial, too much trust can have harmful effects (Langfred, 2004). Team potential is vital affected by trust to increase ability of team to work together (Dirks and Ferrin 2001).

In many teams, trust in leadership signifies a meaningful concept, as typically the most formal power on the team is held by the leader (Bass 1990). Early literature has argued on the significance of trust in effective leadership (Argyris 1962, McGregor 1967, and Likert 1967). Importance of trust as being an important element of effective workgroups have been suggested by current researchers (Larson & LaFasto, 1989; Golembiewski & McConkie, 1975). Trust has been found as a core basis of leadership effectiveness (Fairholm, 1994; Bennis & Nanus, 1985; Zand, 1997). Multiple leadership theories have also stressed upon the vital role of trust either the idea that a charismatic leader who build trust in his followers (Shamir, Zakay, Breinen, & Popper, 1998; Kirkpatrick & Locke, 1996) or one of the means of operation of transformational leadership. The perception of subordinates in terms of effective leadership is centrally focused on trust (Hogan, Curphy, & Hogan, 1994). Shared leadership has strong basis when developed on trust. Researchers have mentioned trust as one of the proposed benefits of shared leadership (Bligh, Pearce, & Kohles, 2006; Hoch & Kozlowski, 2014).

A positive association between trust and shared leadership has being indicated in research (Bergman, Rentsch, Small, Davenport & Bergman, 2012; Wang et al., 2014). As shared leadership among the team grows, the trusting bond among the team members develops overtime to ensure smooth working as the group with potential of growth and development is attributed dynamically by trust when leadership is shared among team members (Drescher, Korsgaard, Welp, Picot, & Wigand, 2014).

Aime, Humphrey, DeRue, & Paul (2014) argued that balance is restored among group members and trust is built through exercise of shared leadership creating positive social exchanges between them (Blau, 1972).

*Hypothesis II: Shared leadership is positively associated with team trust.*

## 2.3 Trust and Team Effectiveness

Working in teams, with greater efficiency, depends on group coherence and mutual relationships built on not only task interdependence but on interpersonal relationships and trust. The team must have a shared vision to achieve the project team objectives in most efficient and effective manner thus it is important that group values are built through positive interaction based on trust and cooperative behaviors (Jones and Goerge, 1998; Sundstrom, De Meuse, & Futrell, 1990).

Significance and impact of trust for team effectiveness has been mentioned in early organizational psychology literature (Argyris, 1962; Likert, 1967; McGregor, 1967) while current researchers have also found it to be an important element of effective workgroups (Golembieski & McConkie, 1975; Larson & LaFasto, 1989; Dirks, 2000) in order to develop shared mental models and higher degrees of team effectiveness (Fransen, Kirschner & Erkens, 2011). Trust was found to be most important in increasing team collaboration and reducing competitive conflict among virtual teams (Staples and Webster, 2008; Lin, Wang, Tsai & Hsu, 2010).

Exploration of direct relationship between team effectiveness and trust has been done at group levels (Dirks and Ferrin, 2001), suggesting that the relationship is more complex than previously conceptualized. Multiple processes may affect the intensity of trust to gain positive team performance. For example the processes of communication and cooperation lead to increased levels of trust among members of the team, which then enhances the performance of the team (Drescher, Korsgaard, Welpe, Picot, & Wigand, 2014).

As project team effectiveness is evaluated on the scales of time, cost and quality and its continuous improvement and efficacy in completing its phases, it needs intensive co-operation among each other. In order to gain these goals and objectives the standard operating procedures and policies may not work all the time as the effectiveness of human resource is greatly affected by its social environment comprising of the team its working worth and people they have to deal. This can only be achieved by presence of trust among the team members thus trust becoming a hygiene factor for team performance (Erdem, Ozen & Atson, 2003). Although there

can be some extreme situations where excessive trust can cause lack of questioning (Nesk, Connerley & Manz, 1997) but with a complete lack of it will result in gaining the required synergy and the team members will lack willingness to help and co-operate with each other (Sitkin & Roth, 1993; Jones & George, 1998) which may result in slowing down the team performance. These finding, thus, give way to our next hypothesis stating:

*Hypothesis III: There is a positive relation between trust and team effectiveness in project teams.*

## 2.4 Mediating Role of Trust

Emerging research suggests that shared leadership helps to create a shared vision which can greatly influence dynamics as well as performance of the team (e.g., Pearce & Ensley, 2004). The positive impact of shared leadership on relationships (Bergman et al., 2012) and attitudes (Hoch & Dulebohn, 2013) of team members have been posited by the scholars. The shared leadership in teams not only enhances the ability of team members to utilize their expertise (Aime et al., 2014; Burke, Fiore, & Salas, 2003) but also boosts cognitive resources of the group (Burke et al., 2003; Day, Gronn & Salas, 2004) thus enabling them to work in better coordination as project teams, specially, are time and cost bound and cannot afford to face unnecessary delays and conflicts.

Positive changes in performance of groups are lead by trust development among team members. The team saves itself from unnecessary conflict and wasting time in petty issues focusing more on the individual tasks as less time is spent on monitoring each others activities when individuals trust one another (Langfred, 2004) and teams have higher levels of innovation (Aime et al. 2014). As indicated in researches, trust motivates individuals to exert effort beyond their formal role requirements (Colquitt, Scott & LePine, 2007), thus increasing the degree of cooperation to achieve collectively shared goals (McEvily, Perrone, & Zaheer, 2003).

Trust has is an empirical and practical link to shared leadership acting as a critical component to performance in groups (Bligh et al, 2006; Bergman et. al, 2012) as higher levels of innovation are acquired through positive changes in shared leadership (Aime et al., 2014). Although many factors may be playing their part in enhancing team effectiveness in shared leadership processes, trust is one of the facets through which team performance can be affected through shared leadership. Drescher et al., (2014) found that trust fully mediates the shared leadership impact resulting in improved group performance while shared leadership alone does not have that strong an impact thus emphasizing the critical role of building trust in order to gain optimum performance. These arguments suggest that growth in shared leadership is positively related to improved performance through its influence on trust, based on which is our hypothesis:

*Hypothesis IV: Trust plays a mediating role between shared leadership and team effectiveness.*

## 2.5 Moderating Role of Team Commitment

A sense of willingness and duty felt by the team in achievement of project goals and to do the appropriate things to make project successful is referred to as commitment (Ashforth & Mael, 1989; Kline & Peters, 1991; MsDonough, 2000). Attitudinal approach poses that commitment is a positive feeling towards organization depending upon employee experiences on job and their perception of organization (Steers, Mowday & Porter, 1982). Commitment refers to multiple foci, as proposed by Reichers (1985), for instance, more loyalty and ties will be shown by the employees to their work groups as a team as immediate feedback can be collected (Bishop, Scott, Goldsby, & Cropanzano, 2005).

Team commitment can be defined in terms of the strength of team members', their identification with the team and involvement with their team is termed as team commitment (Mowday et al. 1982, Bishop & Scott, 2000). Working in teams will enable employees to gain positive experiences, identify with shared values and collective goals and would willingly want to remain in the team in order to

contribute in the achievement of team goals, positively (Mowday, Steers, & Porter, 1979). Often an exchange relationship is developed between team members and team where on one hand, something is received from team by each member (e.g., practice leadership, getting assistance, and trading shifts) while on the other hand, in return, member commitment towards the group is ensured (Mowday et al., 1979). Team commitment is identified as one of the measures of indicators of team viability by Balkundi & Harrison (2006).

Team members, when committed to project goal achievement, recognize with the attitude of we are in it together (Tjosvold, 1984) and bear the view of being collectively account-able for achieving project goals together. according to the findings of several researchers, better performance is lead by teamwork, such as greater employee job satisfaction, less absenteeism, improved service quality, workplace productivity enhancement, and reduced turnover rate. Planning, problem solving, consideration and overall effectiveness of team members is used as a measure of team effectiveness by Hiller, Day and Vance (2006).

Team effectiveness is gained when group works as a performing unit and measures team outcomes (Hackman, 1987). Although researchers measure dimensions of performance and members behaviors in team setting while assessing effectiveness (Cohen & Bailey, 1997), in present study, team effectiveness is measured in terms of project team performance in achievement of project goals while keeping commitment level as moderating entity.

A strong relationship between group effectiveness and commitment has been found by Klein & Mulvey (1995) and McDonough (2000) which shows that focus of teams with strong commitment lies primarily on their contribution towards project goals keeping in view the budget and schedule constraints. Although findings gained by Powell, Galvin, & Piccoli (2006) demonstrated positive correlation between team trust and team commitment yet an insignificant relationship between trust and commitment was reported in some researches (Park, Henkin and Egley, 2005).

Trust among team members has been found to be beneficial for team performance (Dirks, 1999; Braun, Peus, Weisweiler & Frey, 2013) as it allows team members to exchange resources and allocate their energy to contribute positively towards team

performance and effectiveness (Dirks, 1999). In situations where team members lose focus on interests and goals of the team and start focusing on personal interests, team members dedicate most of their energies being defensive thus resulting in consumption of valuable resources which could have been better used and spent to attain team goals (Mayer & Gavin, 2005). The relation between trust and team effectiveness has been reported to have main effect in some studies while others have reported it to have least or negative effect. While Smith and Barclay (1997) and McAllister (1995) found a positive relation on the other hand Dirk (1999) found no significant relation between trust and team performance behaviors.

Although positive association among trust and team effectiveness is expected through this study through shared leadership practices, it is also expected that the effectiveness benefits will be contingent on commitment level of the team members. From the perspective of social identity theory of leadership, this study focuses on the extent of identification of group members with the team goals and objectives by practicing shared leadership and gaining most effectiveness while building trust among each others leadership roles and qualities which is moderated by team commitment of the members.

When commitment level of project team members is high and there is a mutual understanding that teamwork is critical to accomplish project goals implying that trust strongly influences team effectiveness. When team commitment is at lower levels, by contrast, team members are observed to work relatively within their formal responsibilities and are not motivated enough to give their best in order to be most effective thereby weakening the effect of trust on team effectiveness.

*Hypothesis V: Team commitment moderates the relationship among shared leadership and team effectiveness through trust within project teams.*

## 2.6 Theoretical Framework

The theoretical model tested in this study is shown in Figure 2.1.



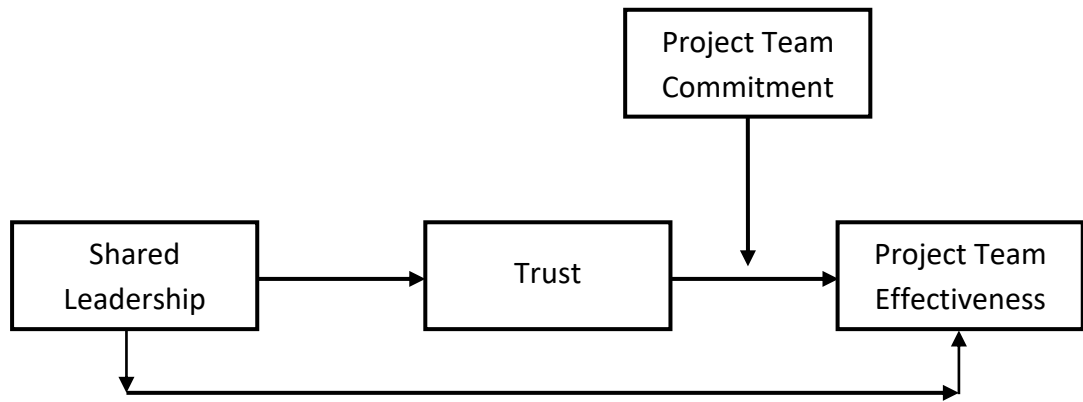


FIGURE 2.1: Research Conceptual Model of impact of shared leadership on team effectiveness with trust as mediator and team commitment as moderator.

## 2.7 Research Hypothesis

H<sub>1</sub>: Shared leadership in project teams is positively related to the team effectiveness.

H<sub>2</sub>: Shared leadership is positively associated with team trust.

H<sub>3</sub>: There is a positive relation between trust and team effectiveness in project teams.

H<sub>4</sub>: Trust plays a mediating role between shared leadership and team effectiveness.

H<sub>5</sub>: Team commitment moderates the relationship among shared leadership and team effectiveness through trust within project teams.

# Chapter 3

## Methodology

### 3.1 Introduction

The specific techniques adopted in the process of research in collection of collecting, assembling and evaluating data are involved in research methodology undertaken to study constructs, variables and their impacts.

This chapter bears the research design, data collection methods and data analysis techniques and sampling methods, highlighting measurement and instrument reliability analysis of each variable, to get valid results. This includes the description of methodology used to find relationship between shared leadership and project team effectiveness with mediating role of trust and moderating role of team commitment in project teams and analysis of the result on the basis of proposed hypotheses to find whether the hypotheses are approved or rejected.

### 3.2 Research Design

The strategy and framework used to combine various research components, integrating them in logical and coherent way is the research design that a researcher adopts to effectively address and handle the research problem. This section constitutes the details for the data collection, measurement and data analysis.

### **3.2.1 Type of the Study**

The current systematic research is conducted to highlight the impact of shared leadership, in horizontal settings, within project teams on the project team effectiveness. As the study is focused on shared leadership practices of project team within Pakistan, specifically, the project-based organizations and project team members working within geographical boundaries of Pakistan were used as target population in order to get reliable result of the study. Initially 350 questionnaires were expected to be responded while distributed in soft form using online forms out of which 308 responses were received. The chosen sample is considered to be representative of entire project-based teams population functioning in Pakistan most likely exhibiting the characteristics of population and generalize the results from the sample to the target population overall.

### **3.2.2 Research Philosophy**

Research philosophy is the belief and assumption of a researcher about what is important in study, what can be identified, what research designs and strategies are appropriate to undergo a study along with what standards of judgment are suitable to be used for assessing quality of information gathered and what phenomenon should be used for gathering data and data analysis.

In present study, positivists approach is adopted according to which predictions can be made about constructs and inter-relationships of variables on basis of previous researches, observations and viewpoints without interfering with the model being studied. Using the hypothetico-deductive model, five hypotheses are deduced as initial predictions and to be tested, keeping in view the logic of explanation. Quantitative research methods are used for measuring the impact and association among variables being studied in this research. The collected data through questionnaires will be analyzed through statistical analysis to confirm whether the predictions made through hypotheses are correct or not, leading to refinement of hypothesis for future research and suggesting new areas of research.

### **3.2.3 Unit of Analysis**

The major entity in a research is the unit of analysis which refers to the level of aggregation of the data collected during the subsequent data analysis stage (Cavana et al., 2001). It provides the boundaries of who and what is being studied and may include individuals, groups, organizations, cultures, etc.

To measure the effect of shared leadership on effectiveness of project team members, our primary focus was on the individuals who work as team members in project-based organizations or any kind of projects within geographical boundaries of Pakistan. As shared leadership processes are based on distributive leadership, in which participation of every team member of project team takes on leadership role for his expertise on the specific project phase, the general approach was to access the project teams and get data from individual team members for first-hand knowledge of their experiences.

### **3.2.4 Time Horizon**

As the target was to distribute and receive almost 300 responses, cross-sectional study was implemented and time was not considered as variable as whole data could not be collected at the same time. Data was collected from respondents over a period of 50 days, i.e. approx. two months as project team members across Pakistan were to be accessed.

## **3.3 Population and Sample**

### **3.3.1 Population**

The present study is focused on project-based organizations operating within geographical boundaries of Pakistan. Hence, the population of the study included national and multi-national project-based organizations of Pakistan working in projects of social services, healthcare, infrastructure, software development etc.

Data was collected from the project teams including supervisors, managers, leaders, subordinates and any other team members involved.

The data is collected through questionnaire that was to be filled via online facility of Google forms.

### **3.3.2 Sample and Sampling**

The method allowing researchers deduce information and results about population, based on a section of population that represents the whole population, is referred as sampling. Based on theory of probability, probability sampling is a sampling technique where population sample is chosen using a random selection while in non-probability sampling, not all individuals in the population bear equal chances of selection during the process.

In this study, non-probability sampling is used which is convenient and judgmental. Project teams, working in Pakistan, are considered as population, data is collected from the individuals working in any kind of projects as project team members. These individuals are considered as data sample representing all project teams operating in Pakistan. The companies were contacted through personal contacts and references, requesting project team members to take part in the survey, which is to be used for educational research purpose only. Questionnaire link was sent through text messages, social media and emails. Total 308 valid responses were collected within the time period of two months. As responding to all questions was a mandatory condition for submission of questionnaire in Google forms questionnaire tool, all 308 responses were treated as valid and used for further analysis. Respondents filled total five sections with section 1 requiring information on demographics (age, gender, qualification & work experience), section 2 with questions on shared leadership, section 3 with questions on team effectiveness, section 4 with questions on trust while section 5 with questions on team commitment. Five point Likert scale was used as measurement scale for each response, each point representing strongly disagree, disagree, neutral, agree and strongly agree from 5 to 1, respectively.

## 3.4 Sample Characteristics

In order to have basic idea about their frequency among total responses collected, rate of occurrence of demographics and basic characteristics was drawn out in early stages of data analysis. The demographics considered in this study were age, gender, educational qualification and work experience of each respondent.

### 3.4.1 Gender

Gender is a very significant component among demographics, aiming to a balanced representation of both genders in a certain subset of population. In current study, although a considerable effort was made to approach both genders at equal level but it has been observed that male population ratio is greater than female population among project teams. Table 3.1 represents the characteristics and frequency of gender in this study:

TABLE 3.1: Gender Distribution.

<b>Gender</b>	<b>Frequency</b>	<b>Percent</b>	<b>Valid Percent</b>	<b>Cumulative Percent</b>
Male	200	64.9	64.9	64.9
Female	108	35.1	35.1	100.0
<b>Total</b>	<b>308</b>	<b>100.0</b>	<b>100.0</b>	

Table 3.1 shows information about frequency and percentage of gender in current study sample. Table reveals that 64.9% respondents were male while 35.1% were females among total 308 project team members.

### 3.4.2 Age

Age of respondents is also one of the four demographics collected through questionnaire. For the convenience of respondents, age is divided into four ranges as some respondents may not be comfortable with sharing their exact age and also that age is not considered as much of vital importance in this study. The age ranges are divided as 20-30, 31-40, 41-50 and 50 onwards.

TABLE 3.2: Age Distribution.

Age	Frequency	Percent	Valid Percent	Cumulative Percent
20-30 years	124	40.3	40.3	40.3
31-40 years	96	41.2	41.2	71.4
41-50 years	49	15.9	15.9	87.3
50 Onwards	39	12.7	12.7	100.0
<b>Total</b>	<b>308</b>	<b>100.0</b>	<b>100.0</b>	

Table 3.2 shows information about frequency and percentage of different age ranges in current study sample.

Table reveals that 40.3% respondents were aged between 20-30 years, 41.2% are between 31-40 years, 15.9% fall between 41-50 years and 12.7% are above 50 years of age.

### 3.4.3 Qualification

Education is the key element in ensuring a sustainable progress of any country. It sets the pace for building competence and growth, thus, acting as an important factor of demographics. As projects are time and cost bound, qualification of project member plays a vital role in ensuring that the project phases are being handled by suitably well qualified individuals.

Qualification, in this study, is divided into three categories as:

1. Intermediate or equivalent
2. Graduation or equivalent
3. Post-graduation or equivalent.

Table 3.3 shows information about frequency and percentage of qualifications of the respondents in current study sample. Table reveals that 1.3% respondents had education of intermediate or equivalent, 30.5% are graduate or equivalent while 68.2% project team members have post graduate or equivalent degrees.

TABLE 3.3: Qualification Distribution.

Qualification	Frequency	Percent	Valid Percent	Cumulative Percent
Intermediate or Equiv.	4	1.3	1.3	1.3
Graduate or Equiv.	94	30.5	30.5	31.8
Post Graduate or Equiv	210	68.2	68.2	110.0
<b>Total</b>	<b>308</b>	<b>100.0</b>	<b>100.0</b>	

### 3.4.4 Experience

Expertise and work knowledge of an individual is shown through his experience. Although fresh graduates/post graduates are more capable for bringing in new ideas and innovation but the experience personnel has more of hands-on experience of skills and knowledge needed for the specific job. The job experience is also categorized into ranges of 1 to 3 years, 4 to 6 years, 7 to 9 years and 10 or above years.

TABLE 3.4: Experience Distribution.

Experience	Frequency	Percent	Valid Percent	Cumulative Percent
1-3 years	36	11.7	11.7	11.7
4-6 years	128	41.6	41.6	53.2
7-9 years	81	26.3	26.3	79.5
10 years & Onwards	63	20.5	20.5	100.0
<b>Total</b>	<b>308</b>	<b>100.0</b>	<b>100.0</b>	

Table 3.4 shows information about frequency and percentage of job experience of the respondents in current study sample. Table reveals that 11.7% respondents had work experience ranging from 1 to 3 years, 41.6% have 4 to 6 years of work experience, 26.3% bear experience of 7 to 9 years while 20.5% have work experience of 10 years or above.

## 3.5 Research Instrument

The study was conducted by collecting valid responses from sample population through questionnaires comprising of close ended questions. The questionnaires



for each variable were adopted from online and manual authentic resources.

Online questionnaire was created by using Google forms and invites to fill the form were sent through emails, text messages, official organizational email networks and social media. The responses were recorded using five point Likert scale, ranging from 1 to 5, representing range from strongly disagree to strongly agree, respectively. Respondents were ensured that the information provided by them will be used for educational research purpose only, keeping in view the confidentiality and ethics.

### **3.5.1 Shared Leadership**

The 21 item questionnaire was adopted from questionnaire for shared leadership developed by Pearce and Sims (2002). Responses were tapped using five point Likert scale with strongly disagree represented by 1, Disagree by 2, Neutral by 3, Agree by 4 and Strongly agree being represented by 5. The questions required responses regarding intra-team coordination, encouragement, trust on each others skills and abilities and leadership process being practiced within team.

### **3.5.2 Team Effectiveness**

The questionnaire for team effectiveness, developed by Barrick, Stewart, Neubert & Mount (1998), is used to collect data. The questionnaire consists of 8 questions which include questions relating to quality and quantity of work being produced by team, initiatives taken, efficiency and effectiveness of the team as well as interpersonal skills of the team members. Responses were recorded by giving options using five point Likert scale with strongly disagree = 1, Disagree = 2, Neutral = 3, Agree =4 and Strongly agree is represented by 5.

### **3.5.3 Trust**

Questionnaire for trust developed by Kirkman, Rosen, Tesluk & Gibson (2006) is used to study the mediation of trust among team members. Responses to 4

questions are required focusing on degree of trust, belief on each other and sharing of significant ideas to the team. Responses are to be given on a five point Likert scale with 1, 2, 3, 4 and 5 are represented by strongly disagree, disagree, neutral, agree and strongly agree, respectively.

### 3.5.4 Team Commitment

The questionnaire of Colquitt, Jason A. (2001) for team commitment is used in this study. Three questions regarding commitment to the team goals, emotional attachment and sense of belonging with the team keeping in view the overall team commitment levels are included. Responses were collected using five point Likert scale with strongly disagree, disagree, neutral, agree and strongly agree being represented by 1, 2, 3, 4 and 5, respectively.

TABLE 3.5: Instruments.

No.	Variable	Source	Item
1	Shared Leadership IV	Pearce & Sims (2002)	21
2	Team effectiveness DV	Barrick, Murray (1998)	8
3	Trust Med	Kirkman, Bradely L. (2006)	4
4	Team Commitment Mod	Colquitt, Jason A. (2001)	3

Table 3.5 explains the variables, their status in the current study, their source and total items or questions dedicated to collect data to analyze each variable. Shared leadership is the independent variable with 21 items, Team effectiveness is the dependent variable with 8 items, Trust is studied as mediator with 4 items and Team effectiveness has 3 items.

## 3.6 Scale Reliability

Reliability is the process employed to measure something more than once, using an instrument, to check whether or not you get the same answer every time. If

application of a specific measure produces the same results, when applied on the object of measurement number of times, the measure is considered to be reliable. In research, the degree to which the employed research method produces consistent and stable result is termed as research reliability. Reliability analysis is done to check how consistently a scale reflects the construct being measured in the specific research. To measure the reliability, Cronbach (1951) introduced a measure that computes coefficient correlation of data by splitting it into two halves in every possible manner and performing calculations for each split. Cronbachs alpha refers to the average of these computed values making it one of the frequently used ways to assess the internal consistency or reliability of test items or a set of scale, by measuring the strength of consistency of a concept.

The reliability coefficient of Cronbachs alpha usually ranges from 0 to 1. The closer the coefficient is to 0, the lesser the internal consistency of items in the scale and the closer the coefficient to 1, the greater the consistency. According to the rule set by George and Mallery (2003), the output for Cronbachs alpha can be interpreted as “Excellent” if greater than 0.9, “Good” if  $> 0.8$ , “Acceptable” when more than 0.7, “Questionable” if  $> 0.6$ , “Poor” when  $> 0.5$  and can be considered “Unacceptable” if falls below 0.5. The acceptable value of Cronbachs alpha in case of intelligence tests is 0.8 while for ability tests, 0.7 is acceptable (Kline, 1999). In this research study, Cronbachs alpha of variables is computed for reliability analysis and results are shown in Table 3.6.

TABLE 3.6: Scale Reliability.

Variable	Cronbachs Alpha	Items
Shared Leadership IV	.902	21
Team effectiveness DV	.874	8
Trust Med	.762	4
Team Commitment Mod	.829	3

Table 3.6 shows the values of Cronbachs alpha computed to check reliability of the variables and their items. Shared leadership has value of .902 which falls into category of “Excellent” reliability, Team Effectiveness has “Good” reliability with

value of .874, reliability of Trust is “Acceptable” having value of .762, while with value of .829, Team commitment also fall in category of having “Good” reliability.

### 3.7 Statistical Tools

Statistics refer to the mathematical computations done to analyze the set of data. Different tools are used in statistical analysis to summarize, describe and compare data. Various tools for statistical analysis range from simple computations to advanced complex methods for studying, understanding and analyzing the data. Descriptive analysis is used to describe data by using specific tools. Frequency, percentages and measures of central tendency (mean, mode, median) are tools of descriptive analysis. Moderate analysis focuses on variable relationships and elaborates the nature and significance of these relationships by checking correlation and regression. Advanced analysis includes variance calculations helping the researcher to see the variety existing in the data and positive outcomes in research. Analysis of variance is done after calculating standard deviation along with covariance analysis.

In this study, we use all three statistical analysis tools to study and interpret data. The relationship between shared leadership - independent variable and team effectiveness dependent variable is studied through regression analysis while impact of various factors over dependent variable is checked by multiple regression analysis. The relationship between shared leadership (IV) & Trust (mediator) and between team effectiveness (DV) & Trust is also studied. Moderation, mediation and their impact is also checked by multiple regression while to check mediated moderation, Hayes model 14 (Preacher and Hayes, 2004) is employed to analyze conditional effects.

### 3.8 Data Analysis Techniques

Data was collected from 308 respondents working as project team members within Pakistan. The select data was processed and analyzed using SPSS software as

analysis tool. Following is the step by step outline giving an overview of data analysis process taken up in this study:

1. Initially, the responses were collected through questionnaires with multiple items, representing each variable.
2. Data was encoded in SPSS under variables of shared leadership (SL), team effectiveness (TEF), trust (T) and team commitment (TCM) for analysis.
3. Frequency tables were generated to explain characteristics of sample and demographic details.
4. Reliability analysis was done for each variable and reliability was checked using Cronbach's alpha values.
5. Correlation analysis was carried out using Pearson correlation to check significant relationship between variables.
6. The relationship between independent and dependent variable was tested through single linear regression analysis.
7. Preacher and Hayes process is used to study impact of mediation, moderation and mediated-moderation on the relationships among variables.
8. The rejection or acceptance of proposed hypothesis of current study was determined after computations done through descriptive moderate and advanced statistical analysis through SPSS and Hayes Process model.

# Chapter 4

## Results

This chapter elaborates the results regarding descriptive, moderate and advanced statistics with measures of central tendency (Mean, Mode & Median) and computed results of standard deviation, correlation and regression (linear and multiple). The detailed statistical analysis, on the data, was performed using statistical software SPSS (Statistical Package for Social Sciences) while mediated moderation was calculated through use of Hayes PROCESS dialogue version 3.4 installed as an extension to SPSS.

### 4.1 Descriptive Statistics

Standard deviation (abbreviated as Std. Dev or SD) refers to the computed value that helps to understand the extent to which the data is spread from or concentrated around the average (mean). In research, standard deviation is calculated by the researchers to know how spread the responses are and either the respondents rate mostly in the middle of the scale i.e. Neutral or did some opt for strongly agree or strongly disagree too. A low standard deviation implies that most points of data are close to average value while high value shows that data points, on average, are far from average and looks spread out. Generally, standard deviation does not indicate better or worse, acceptable or unacceptable, it is used purely as descriptive statistics describing the distribution in relation to the mean.

Descriptive analysis of all variables namely shared leadership, team effectiveness, trust and team commitment is presented in the table below:

TABLE 4.1: Descriptive Statistics.

Variable	N	Min.	Max.	Mean	SD
Shared Leadership - IV	308	1.00	5.00	3.469	.539
Team effectiveness - DV	308	1.63	5.00	3.776	.635
Trust - Med	308	1.14	5.00	3.552	.609
Team Commitment - Mod	308	1.00	5.00	3.778	.786

Table 4.1 represents the standard deviation of input response values of each variable. N represents the total number of responses for each variable.

The minimum value of shared leadership and team commitment is 1.00 while it is 1.63 for Team effectiveness and 1.14 for Trust. Maximum value of all variables is 5.00. Shared leadership has 3.47 mean while SD is 0.54, mean of Team effectiveness is 3.78 and SD is 0.635, Trust has mean of 3.55 and SD 0.60 while Team commitment has 3.78 as mean and 0.785 SD.

## 4.2 Control Variables

In order to measure the impact of demographic variables on dependent variable (shared leadership), one-way ANOVA test was conducted for covariates impact. One-way ANOVA test is used for analysis of variance by comparing means of two or more independent groups to determine the significant difference associated with population means. The F test in one-way ANOVA indicates whether or not there is any significant difference in the means while p-value shows significance level upon which the acceptance or rejection of null hypothesis is established. If p-value is less than 0.05 then a significant impact of demographic variable on independent variable is considered while if it is more than 0.05, then the impact is comparatively insignificant. In case of significant impact, the demographic variable is to be controlled in rest of the computations.

The main purpose of current study is to find relationships and impact of variables as proposed in the model (Figure 2.1) being tested, therefore demographics are to be treated as control variables. By conducting one-way ANOVA using SPSS, the influence of demographic variables on dependent variable is detected, if found, and the effect is controlled during further analysis as covariates impact.

TABLE 4.2: Control Variables.

Control Variable	F -Value	Significance
Age	6.636	.000
Gender	8.624	.004
Qualification	5.193	.006
Experience	5.512	.001

Table 4.2 shows significant impact of all four demographic variables, i.e. age, gender, qualification and gender, on independent variable of shared leadership. Age has  $p < 0.001$ , gender has  $p < 0.01$ , qualification has  $p < 0.01$  and experience has p value of .001.

### 4.3 Correlation Analysis

Correlation refers to the bi-variate analysis used for investigating and measuring association and strength of relation between two variables. Pearsons correlation coefficient is the test statistics and is a measure of strength of statistical relationship between variables. It gives information on direction as well as magnitude of the direction of relationship. The relationship is checked for its linearity by using a scatter plot of the variables where independent variable is plotted on x-axis and dependent variable is plotted on y-axis. The strength of association is higher if scatter of points is nearer to a straight line. The value of correlation coefficient varies from +1 and -1. The perfect degree of association is indicated by  $\pm 1$ . The closer the value is to 0, the weaker is the relationship between two variables. To simplify, if value of Pearsons correlation coefficient “r” falls in range of 0.1 to 0.3, it is called a weak correlation, if it falls between 0.3 and 0.5, it signifies moderate



correlation while correlation is considered high when its value is greater than 0.5. Zero value means there is no relationship between the two variables. The sign of coefficient with + sign shows a positive relationship while a - sign denotes a negative relationship.

Pearsons correlation analysis was carried using SPSS to find the association between the independent variable shared leadership, dependent variable team effectiveness, mediating variable trust and moderator team commitment. Correlation between all theoretical variables is represented in Table 4.3.

TABLE 4.3: Correlation Analysis.

Variable	Shared Leadership	Team Effectiveness	Trust	Team Commitment
Shared Leadership	1			
Team effectiveness	.297**	1		
Trust	.479**	.690**	1	
Team Commitment	.276**	.697**	.878**	1

\*\**. Correlation is significant at the 0.01 level (2-tailed). N = 308*

Table 4.3 shows the positive correlation between shared leadership and team effectiveness ( $r = 0.297^{**}$ ,  $p < 0.01$ ). There is also positive relationship of shared leadership with trust ( $r = 0.479^{**}$ ,  $p < 0.01$ ) and team commitment ( $r = .276^{**}$ ,  $p < 0.01$ ). Positive association of team effectiveness is found with shared leadership ( $r = 0.297^{**}$ ,  $p < 0.01$ ), trust ( $r = 0.690^{**}$ ) and team commitment ( $r = 0.697^{**}$ ,  $p < 0.01$ ). Trust is positively correlated with shared leadership ( $r = 0.479^{**}$ ,  $p < 0.01$ ), team effectiveness ( $r = 0.690^{**}$ ,  $p < 0.01$ ) and team commitment ( $r = 0.697^{**}$ ,  $p < 0.01$ ). Team commitment has positive relationship with shared leadership ( $r = 0.276^{**}$ ,  $p < 0.01$ ), team effectiveness ( $r = 0.697^{**}$ ,  $p < 0.01$ ) and trust ( $r = 0.878^{**}$ ,  $p < 0.01$ ).

## 4.4 Simple Regression Analysis

As relationship between the variables being studied is established through correlation analysis yet the exact events that lead to this relationship identifying the events leading to cause-effect are to be identified.

Thus, in order to further examine and investigate the relationship between shared leadership, which is independent variable in current study, and team effectiveness (dependent variable), the statistical method of regression analysis is used. This technique of predictive modeling and analyzing data indicates the influence along with strength of impact and causal relationship between independent variables on dependent variables and is used for forecasting.

To measure and predict the extent of linear relationship between dependent and independent variables, the statistical data analysis technique of linear regression is used. In single linear regression, relationship between one independent variable and one dependent variable is predicted while in multiple linear regression two or more independent variables are used instead.

### 4.4.1 Regression Analysis

Hypothesis I enunciates that shared leadership in project teams is positively related to team effectiveness. The regression analysis shows the following relationship between shared leadership and team effectiveness:

TABLE 4.4: Regression Analysis of H<sub>1</sub>.

Team Effectiveness			
Predictor	$\beta$	R <sup>2</sup>	Sig.
Shared Leadership	.350	.085	.000

Table 4.4 shows the results for the regression analysis of first hypothesis H<sub>1</sub>. The beta coefficient is .350 and R<sup>2</sup> = .085. The significance is calculated as p < .001.

As per ANOVA test, significance value p = .000 shows that shared leadership is a good predictor for team effectiveness and model is significant with f (1, 306) =

29.617,  $p < .001$ ). The relationship is considered to be significant when  $p$  is less than alpha (0.05). The results show a positive and significant relationship between shared leadership and team effectiveness with  $p$  value  $< .001$ . The beta coefficient equals .350 showing the positive effect with  $y = .350X + 2.561$  where  $X$  is IV i.e. shared leadership and  $Y$  is DV i.e. team effectiveness. The value of  $R^2$  is .085 which shows that 8.5% of variance in team effectiveness (outcome variable/DV) can be explained by the shared leadership (predictor/IV). As per this analysis,  $H_1$  is accepted and a positive and significant relation is found between shared leadership and team effectiveness.

Hypothesis II states that shared leadership is positively associated with team trust. The regression analysis results for finding impact of relationship are shown as under:

TABLE 4.5: Regression Analysis of  $H_2$ .

<b>Trust</b>			
<b>Predictor</b>	$\beta$	$R^2$	<b>Sig.</b>
Shared Leadership	.535	.227	.000

Table 4.5 shows the results for the regression analysis of second hypothesis  $H_2$ . The beta coefficient is .535 and  $R^2 = .227$ . The significance value is  $p < 0.001$ .

Significance value  $p < 0.001$ , in ANOVA test, shows that shared leadership is a good predictor for trust and model is significant with  $f(1, 306) = 91.064$ ,  $p < 0.001$ ). The relationship is considered to be significant when  $p$  is less than alpha (0.05). The results show a positive and significant relationship between shared leadership and trust with  $p < 0.001$ . The beta coefficient equals 0.535 showing the positive effect with  $Y = 0.535x + 1.696$  where  $X$  is IV i.e. shared leadership and  $Y$  is DV i.e. trust. The value of  $R^2$  is .227 which shows that 22.7% of variance in trust (outcome variable) can be explained by the shared leadership (predictor/IV). As per this analysis, a positive and significant relation is found between shared leadership and trust and second hypothesis  $H_2$  is accepted.

Hypothesis III states positive relation between trust and team effectiveness which means that team effectiveness is ensured by high degrees of trust. In order to

find the relationship, the simple linear regression analysis was done with following results:

TABLE 4.6: Regression Analysis of H<sub>3</sub>.

<b>Team Effectiveness</b>			
<b>Predictor</b>	$\beta$	<b>R<sup>2</sup></b>	<b>Sig.</b>
Trust	.729	.475	.000

Table 4.6 shows the results for the regression analysis of third hypothesis H<sub>3</sub>. The beta coefficient is .729 and  $R^2 = .475$ . Significance value is  $p < 0.001$ .

As per ANOVA test, significance value  $p < .001$  shows that trust is a good predictor for team effectiveness and model is significant with  $f(1, 306) = 278.592$ ,  $p < .001$ . The results show a significant relationship between trust and team effectiveness with  $p$  value  $< .001$ . The beta coefficient equals 0.73 showing the positive effect with  $Y = .729X + 1.189$  where  $X$  is trust and  $Y$  is team effectiveness. The value of  $R^2$  is 0.475 which shows that 47.5% of variance in team effectiveness (outcome variable/DV) can be explained by the trust (predictor). As per this analysis, hypothesis III is accepted and a positive and significant relation is found between trust and team effectiveness.

#### 4.4.2 Mediation Analysis

To assess the effect of shared leadership on team effectiveness with trust among team members Hayes model 4 was used by running Hayes PROCESS macro Version 3.4 in SPSS. Hayes model 4 specifies the estimation of un-moderated mediation model with  $X$ ,  $M$  and  $Y$  variables only.  $\beta$  coefficients of model 4 paths  $a$ ,  $b$ ,  $c$  and  $c'$  are as shown in figure below:

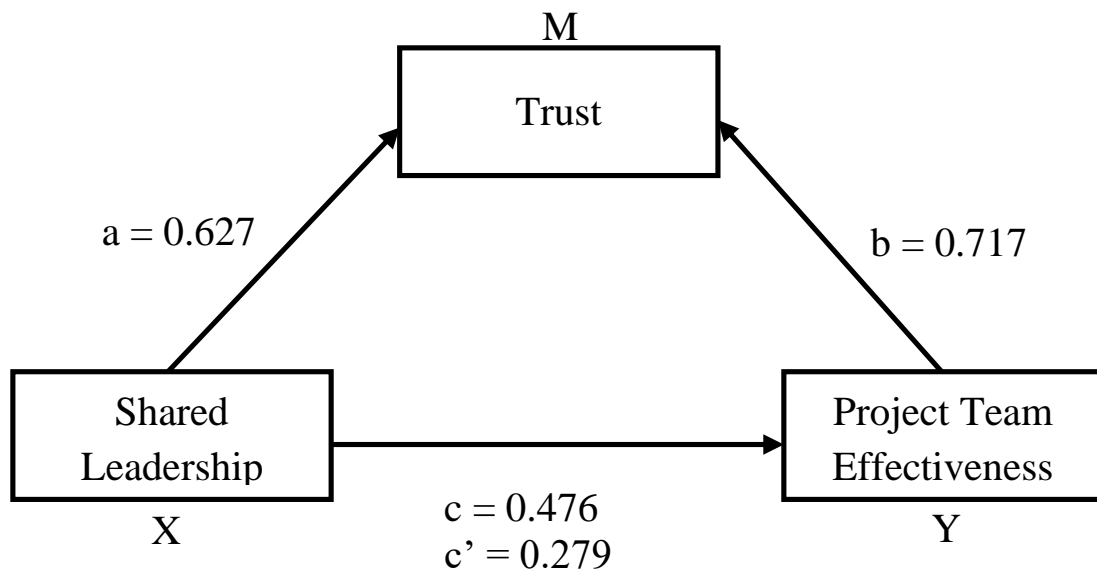


FIGURE 4.1: Mediation analysis with coefficient.

Using 95% confidence level and 5000 bootstrap setting, the result calculations were as under:

1. X variable predicts M - Path a
  - a.  $F(5,302)=30.381, p = .000, R^2 = .335$
  - b.  $b = .626, t(302)=11.35, p<.001$
  - c. Covariates
    - i. Age :  $b = .140, t(302) = 2.88, p = .004$
    - ii. Gender :  $b = -.055, t(302) = -0.931, p = .353$
    - iii. Qualification :  $b = -.009, t(302) = -1.159, p = .247$
    - iv. Experience :  $b = .073, t(302) = 1.373, p = .171$
2. X and M together predict Y
  - a.  $F(6,301) = 57.22, p = .000, R^2 = .53$
  - b. M variable predicts y - Path b
    - i.  $b = .717, t(301) = 14.06, p = .000$
  - c. X variable no longer predicts y or is lessened predicting y - Path c
    - i.  $b = .027, t(301) = .460, p = .645$

## d. Covariates

i. Age :  $b = .046$ ,  $t(301) = 1.062$ ,  $p = .283$ ii. Gender :  $b = -0.123$ ,  $t(301) = -2.319$ ,  $p = .021$ iii. Qualification :  $b = .253$ ,  $t(301) = 4.775$ ,  $p = .000$ iv. Experience :  $b = -0.02$ ,  $t(301) = -.42$ ,  $p = .073$ 

## 3. X variable predicts y - path c

a.  $F(5,302) = 17.61$ ,  $p < .001$ ,  $R^2 = .226$ b.  $b = .476$ ,  $t(302) = 7.58$ ,  $p < .001$ 

## c. Covariates

i. Age :  $b = .145$ ,  $t(302) = 2.65$ ,  $p = .008$ ii. Gender :  $b = -1.673$ ,  $t(302) = -2.392$ ,  $p = .017$ iii. Qualification :  $b = .203$ ,  $t(302) = 2.994$ ,  $p = .067$ iv. Experience :  $b = .0325$ ,  $t(302) = .540$ ,  $p = .590$ 

4. Indirect Effect = .449, SE = .055, 95% CI = (.3426, .5569)

TABLE 4.7: Mediation Analysis

IV	Effect of IV on M (a path)	Effect of M on DV (b path)	Direct Effect (c' path)	Total Effect (c path)	Bootstrapping Results for Indirect Effect	
					LL 95%	UL 95%
Shared Leadership	.626	.717	.37	.476	.3426	.5569

Note: Un-standardized regression coefficient  $\beta$  indicated. Bootstrap sample size = 5000 : LL = Lower limit : UL = Upper Limit :  $N = 308$

Table 4.7 shows that the effect of shared leadership (IV) on trust (M), represented by path A, has  $\beta = 0.626$  while calculations show that  $F(5,302) = 30.381$ ,  $p < .001$ ,  $R^2 = .335$  and  $t(302) = 11.35$ ,  $p < .001$ . The effect of trust (M) on team effectiveness (DV), represented by b path, has  $\beta = 0.717$  while detailed calculations show  $t(301) = 14.06$ ,  $p < .001$ . Path c has  $\beta = 0.027$ ,  $t(301) = 0.460$ ,  $p = 0.645$  and for path c,  $\beta = .476$ ,  $t(302) = 7.58$ ,  $p < .001$ .

The calculations shows the difference of significance between  $c$  and  $c'$  path whereas  $c$  path shows how  $X$  effects  $Y$  without presence of any mediator and  $c'$  ( $c$  prime) shows how  $X$  effects  $Y$  in presence of mediator  $M$ . The beta coefficient changes from 0.476 (path  $c$ ) to 0.027 (path  $c'$ ) and significance level drops from being  $p < .001$ , equivalent to 100%, to 0.064 which is only 93% on path  $c'$  implying that  $X$  is lessened in predicting  $Y$  thus helping us come to the conclusion that mediator  $M$ , trust, in this model has a considerable impact on the relation between shared leadership and team effectiveness. The bootstrap upper and lower levels of confidence (CI) does not have zero in between which also proves mediation in effect.

As through one way ANOVA of demographics, the significance of all covariates was evident therefore the impact was controlled and all four demographic variables were entered as covariates in Process model 4 calculations and age and gender were found to have significant impact in relationship between shared leadership and team effectiveness with trust as a mediator.

The calculations and result show that hypothesis 4 stating that trust mediates the relationship between shared leadership and team effectiveness is proven to be true and is accepted.

### 4.4.3 Moderated Mediation Analysis

Moderated mediation or conditional indirect effect occurs when treatment effect of a predictor independent variable  $X$  on a dependent outcome variable  $Y$  via a mediator  $M$  differs depending on levels of moderator  $W$ . Although the moderated mediation model in current study matches model 14 of Hayes PROCESS version 3.4, model 14 was analyzed to study and assess moderated mediation effect of team commitment using same IV, DV and mediator. We checked the impact of moderation in order to find out that to what extent team commitment moderated the mediated impact of trust on team effectiveness through shared leadership.

The moderated mediation was tested by using PROCESS model 14 where team commitment was entered as moderator, trust as mediator, shared leadership as  $X$

variable and team effectiveness as outcome variable. In this case, the mediated effect of trust on team effectiveness is moderated by team commitment in shared leadership practice.

Model 14 of moderated mediation is shown in figure below:

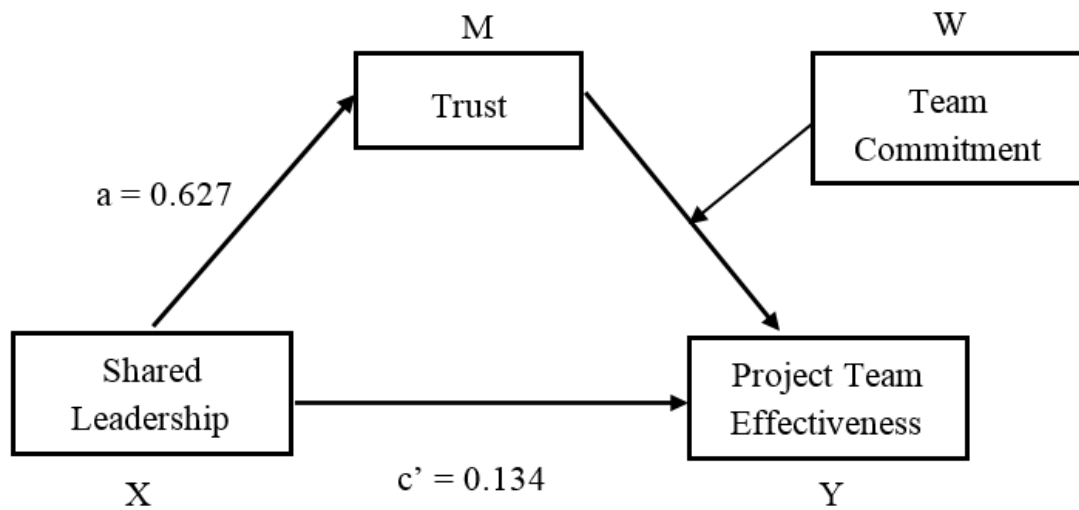


FIGURE 4.2: Moderated Mediation analysis using Model 14.

C1 (low)  $b = .1738$

C2 (average)  $b = 0.2308$

C3 (high)  $b = 0.2687$

C  $t(299) = 2.173, p = 0.0306$

A  $t(302) = 11.35, p = .000$  B

$t(299) = .0237, p = .981$

B  $t(301) = 14.065, p < .001$

W  $\rightarrow$  Y  $t(299) = .0895, p = .9288$

Covariates

- i. Age :  $b = .059, t(299) = 1.368, p = .172$
- ii. Gender :  $b = -.093, t(299) = -1.7854, p = .075$
- iii. Qualification :  $b = .234, t(299) = 4.505, p < .001$



iv. Exp :  $b = -.050$ ,  $t(299) = -1.078$ ,  $p = .282$

The overall model was significant ( $R^2 = .563$ ,  $f(8, 299) = 48.107$ ,  $p < 0.001$ ). The c prime path showing that prediction of team effectiveness by shared leadership is lessened in values and is significant ( $b = .134$ ,  $t(299) = 2.173$ ,  $p = 0.031$ ). There was a significant conditional effect of team commitment on team effectiveness through shared leadership with trust yet the bootstrap estimates revealed a non significant moderated mediation effect. There was a non-significant conditional indirect effect of shared leadership on team effectiveness through trust with team commitment with  $SE = 0.045$ , 95% CI  $[-.046, .130]$  as zero falls between upper and lower levels of CI meanwhile the unconditional interactions of M\*W predicting Y also showed insignificance [ $b = .091$ ,  $t(299) = 1.935$ ,  $p = .054$ ]. The model overall shows that not only relation between trust and team commitment ( $p = .981$ ) is non-significant yet team commitment and team effectiveness ( $p = .929$ ) also have no significant relation among each other. Also, the moderated effect of trust on team effectiveness is also not significant at all with  $p = 0.98$ . Among the four covariates, qualifications of team members showed significance in moderated mediation model.

TABLE 4.8: Moderated Mediation Model 14.

<b>Index of Moderated Mediation</b>			
<b>Index</b>	<b>SE</b>	<b>LL</b>	<b>UL</b>
.057	.046	-.0458	.1302

*Note: LL = Lower limit : UL = Upper Limit  
: N = 308*

The results of moderated mediation model shows the absence of any mediated moderation impact of team commitment on team effectiveness where shared leadership is practiced but the mediation of trust is implied through various observations in the calculations. The calculations and result show that hypothesis 5 stating that team commitment moderates the relationship among shared leadership and team effectiveness through trust within project teams, is proven to be wrong and is rejected.

## 4.5 Summary of Hypothesis

Table 4.9 illustrates the precise summary of results for the proposed hypotheses under this study.

TABLE 4.9: Summary of Accepted/Rejected hypothesis.

Hypothesis	Statements	Results
H <sub>1</sub>	Shared leadership in project teams is positively related to the team effectiveness.	Approved
H <sub>2</sub>	Shared leadership is positively associated with team trust.	Approved
H <sub>3</sub>	There is a positive relation between trust and team effectiveness in project teams.	Approved
H <sub>4</sub>	Trust plays a mediating role between shared leadership and team effectiveness.	Approved
H <sub>5</sub>	Team commitment moderates the relationship among shared leadership and team effectiveness through trust within project teams	Rejected

The summary of results in Table 4.9 show that four out of five hypothesis are accepted while one hypothesis is rejected on the basis of the various statistical analysis applied on the data collected for each variable from project teams. On the basis of the computed results, conclusion can be drawn that shared leadership within project teams is positively mediated by trust among team members and results in high team effectiveness levels while team commitment does not moderate the mediation of trust to achieve team effectiveness in project teams.

# Chapter 5

## Discussion and Conclusion

The overall study of proposed model for findings relationship between shared leadership and project team effectiveness with trust as mediator and moderating effect of team commitment is discussed in this chapter. The findings of the research study through statistical analysis, explained in chapter 4, are discussed by imparting the research questions and examining the corresponding hypothesis for acceptance or rejection. Limitations of current study, its future practical and theoretical implications and recommendations for future research in shared leadership construct and variables which may be moderating and mediating it, will also be discussed along with the conclusion drawn.

### 5.1 Discussion

The main tenacity for this research was to find out the impact of shared leadership on project team effectiveness within project teams operating in Pakistan. The fact that shared leadership practice is a kind of horizontal leadership and not very common in Pakistan lead to this study, as project-based organizations have been introduced in Pakistan not very long ago and vertical leadership is assumed to be a norm whereas the research in field of project management have proposed that for project teams, shared leadership, also called, rotating leadership, is more suitable as well as promising and acceptance to adopting it is advised for better

performance of project teams eventually leading to project success. Trust was studied as a mediator and team commitment was hypothesized to be having a moderating effect to have a combined mediated moderation effect on relationship between shared leadership and team commitment. As the study was focused on project teams working within geographical boundaries of Pakistan, the data was collected from the individuals working as team members of projects of various kinds e.g., IT, infrastructure, healthcare and NGOs, etc.

Trust was treated as a mediator in the current study to reveal its mediating effect on relation between shared leadership and project team effectiveness. Although any kind of leadership practice is based on the trust which helps the leader to influence the followers, the element of trust in shared leadership is more vital as there is no single leader to follow and while every member gets his turn on leadership, lack of trust should result in more team conflicts and less effectiveness. Meanwhile team commitment was treated as a moderator as project team members commitment is very important in ensuring the effectiveness of team. Team commitment should influence the strength of relationship between shared leadership and team effectiveness as a moderator keeping in the view that non-committed members may not act as good leaders and may not cooperate with other team members as well as coordinate with them.

To study the proposed relationship, five hypotheses were deduced. Data was gathered from 308 respondents to test the hypothesis. Hypothesis H1, H2, H3, H4 were accepted while hypothesis H5 was rejected after detailed statistical analysis using correlation analysis, regression analysis and moderation mediation analysis through Hayes PROCESS models. According to findings of current study and acceptance of hypothesis, shared leadership has a positive relationship with team effectiveness while trust among team members has a positive relation with shared leadership as well as team effectiveness. Team commitment, however, has found to have no moderating effect, in the proposed model, while acting along with trust to have a mediated moderation impact on the relationship between shared leadership and team commitment. Thus it is proved that shared leadership results in high

team effectiveness through trust among team members but team commitment as moderator has no effect to strengthen or weaken this relationship.

### 5.1.1 Hypothesis 1

**Shared leadership in project teams is positively related to the team effectiveness.**

A positive relationship between shared leadership and team effectiveness was projected as proposed in hypothesis H1. Pearson's correlation analysis showed a significant correlation between shared leadership and team effectiveness with  $p < 0.01$  reflective of association and strength of the aforesaid relation. Regression analysis with beta coefficient = 0.350 and  $p < 0.001$  and  $R^2$  shows that 85% of variance in team effectiveness can be explained by shared leadership. The beta coefficient value of  $\beta = 0.35$  means that one unit change in shared leadership will have direct effect of 35% change in team effectiveness. This supports out first hypothesis which stands approved on the basis of these findings.

The role of leadership as a critical driver for team effectiveness, irrespective of its source, has already been established through research (Morgeson, DeRue, & Kara, 2010). While shared leadership has already started to gain acceptance in project-based organizations and project-based teams all over the world, researchers have found it to have a great effect on team effectiveness and outcomes (Kozlowski, Gully, Salas & Cannon-Bowers, 1996) and to be an important predictive of team effectiveness in many kinds of teams (Pearce, 1997, Ensley and Pearce, 2000; Pearce and Sims, 2002). The need of time has made it inevitable for organizations in Pakistan to adopt this style of leadership to increase team effectiveness and gain high percentages of project success. Shared leadership, being a horizontal leadership styles as opposed to traditional vertical hierarchal leadership, demands a change of organizational structures, cultures and mindsets. Farh, Podsakoff & Organ (1990) found shared leadership to have more variance in predicting team effectiveness than vertical leadership. It has been found effective for keeping morale of team high, focusing on individual expertise and abilities to boost motivation

and confidence levels resulting in better outcomes. As projects are time and cost bound, the whole focus stands on building a team with most skillful team members who can prove themselves to be valuable in the respective areas of expertise during various project phases.

The results of our study, showing the positive association between shared leadership and team effectiveness, proves that adopting shared leadership processes in project teams will show more team effectiveness in project teams.

### 5.1.2 Hypothesis 2

#### **Shared leadership is positively associated with team trust.**

D Innocenzo et al. (2014) discussed that higher levels of team functioning can be generated when team members can receive or impart influence others due to more levels of trust and respect among each other. Researchers have suggested that changes in leadership through building trust among group members is one of the ways to enhance group performance (Bligh et al., 2006; Wang et al., 2014) while shared leadership practices provide opportunities to the team members to build trust (Bergman et al., 2012). Shared leadership, being an important predictor of group success (De Jong & Dirks, 2012) has been proposed to be benefited by trust (Bligh et al., 2006; Hoch & Kozlowski, 2012).

A positive relationship between shared leadership and trust has been indicated by empirical research (Bergman et al., 2012; Wang et al., 2014; Bergman et al., 2010) while in current study the same positive association between two variables has been found. The correlation among shared leadership and trust through linear regression analysis is found to have  $\beta = 0.535$ ,  $R^2 = 0.227$  with significance of  $p < 0.001$  which shows that one unit change in shared leadership can effect trust up to 53% while 22.7% variance in trust can be explained by shared leadership.

On basis of historical findings as well as current study observations, hypothesis H2 predicting positive association between shared leadership and trust is found to be true and stands approved.

### 5.1.3 Hypothesis 3

**There is a positive relation between trust and team effectiveness in project teams.**

Trust can have a vital impact on interaction among team members, their coordination and cooperation leading to enhanced team effectiveness. Empirical research has reported a significant relationship between trust and team effectiveness (McAllister, 1995; Smith and Barclay, 1997) and it has been found to be important predictor of group effectiveness (Colquitt et al., 2007; De Jong & Elfring, 2010; Serva, Fuller, & Mayer, 2005).

Fransen et al. (2011) reported a significant impact of trust on perceived team effectiveness among learning teams. As team environment is prone to conflicts and communication gaps, it is important that team members develop coordination among each other and respect each other in order to achieve project objectives in the desired time and with least wastage of resources. Trust plays a vital role in teams to develop the professional well as emotional bond among team members which helps in avoiding conflicts and enhancing problem-solving attitudes which in turn results in better outcomes showing enhanced team effectiveness. Keeping in view this perspective as well as past research study, hypothesis H3 was proposed, data was collected and analyzed to find correlation between trust and team effectiveness in project teams. A significant association among trust and team effectiveness is also found as reflected by results of regression analysis showing  $\beta = 0.729$ ,  $R^2 = 0.475$  with significance of  $p < 0.001$ . The beta coefficient shows that one unit change in trust will result in 72% change in team effectiveness while 47% variance in team effectiveness can be explained by trust. The significance levels for the positive relationship between trust and team effectiveness support hypothesis H3 of the current study which stands approved.

### 5.1.4 Hypothesis 4

**Trust plays a mediating role between shared leadership and team effectiveness.**

The fourth hypothesis tested for approval or rejection is focused on role of trust enhancing team effectiveness in project teams where shared leader leadership is being practiced. Influence and authority of others is accepted positively through trust (Tyler & DeGoey, 1996) thus, as a result, proving to be an important factor in increased group performance (De Jong & Dirks, 2012). Team members put extra efforts in achieving collective goals of a team and cooperative behavior proliferates when a trusting bond is developed among them as a team as less time is spent on monitoring each other (Langfred, 2004) or conflict resolutions and more time is spent on tasks on hand and other work activities important for achieving the team goals (McEvily et al., 2003; Serva et al., 2005). Trust has a strong empirical as well as theoretical connection with shared leadership (Bergman et al., 2012; Bligh et al., 2006) and is a critical factor in improving group performance (Colquitt et al., 2007; De Jong & Dirks, 2012).

The findings in current research show a pivotal role of trust in impacting positive aspects of shared leadership on team effectiveness. The mediation effect of trust is between shared leadership and team effectiveness is more significant as compared to direct effect of shared leadership on team effectiveness. When shared leadership practices is being practiced through trust, the team members will show more effectiveness in achieving outcomes or objectives of the project. The observations made through studying and analyzing the mediating effect of trust lead to the approval of hypothesis H3 of this study.

### 5.1.5 Hypothesis 5

**Team commitment moderates the relationship among shared leadership and team effectiveness through trust within project teams.**

Team members experience higher team commitment by sharing more information and bringing more resources to the task when given offered leadership within teams (Katz & Kahn, 1978). A strong relationship is found among commitment and performance of a group by researchers (Klein and Mulvey, 1995; McDonough, 2000).



It has been observed that when although team trust can enhance team performance and effectiveness in shared leadership setups yet if team commitment level is not up to the mark, the trust is affected too resulting in low team effectiveness levels. Team commitment has found to be in positive relation with team effectiveness (Hammond, 2008). Team with high commitment levels leads to develop a high quality project module within time and cost constraints in projects. The moderated-mediation effect of team commitment was proposed to have an impact on team effectiveness where shared leadership style is adopted through trust as it was reported that team commitment increases with increase in team member identification and cohesion with team overall (Johnson & Johnson, 2006). The moderation was tested in two ways through Hayes models 7 and model 14 in order to check effect of moderation on relationship between shared leadership and trust and between trust and team effectiveness respectively. Through both models, multiple regression analysis was performed. The results derived from both analyses showed no significant moderation effect of team commitment. The impact in both calculations was insignificant thus fifth hypothesis H5 stands rejected.

## 5.2 Research Implications

The current study contributes theoretically to past research and theories as well as holds theoretical implications in the field of project management. As project-based organizations are booming in Pakistan, especially due to arrival of CPEC and its associated industries in the region, there is a dire need for maintaining high levels of effectiveness within project teams to deliver project outcomes within time and cost restraints. The work environment in these project teams along with leadership styles need to be revamped as traditionally vertical leadership with single appointed leader is expected as well as widely accepted. The current study projects a much suitable practice to be adopted in project teams working in Pakistan.

The study contributes to the literature in field of project management by focusing on finding the impact of trust in shared leadership to achieve higher effectiveness

levels of project team. Shared leadership, not being a very old construct, is one of the focal research areas in recent researches where its impact, not only as a predictor but also as a mediator and moderator is being studied. Multiple variables affecting it are also being explored to develop further understanding of its practices and their impact in team environments. Shared leadership and its outcomes as well as factors effecting and mediating are not much studied within context of project teams working within geographical boundaries of Pakistan and current study open up new horizons to study and research within this context.

This study also helps explore the importance of trust within teams to strengthen the intra-team practices in order to achieve a common goal in more efficient and effective manner. It sheds light on how development of trust is important in gaining optimum performance of team members and avoiding un-necessary conflict which may waste valuable time of project teams, keeping in view that the projects are bound by time. Project success is measured in terms of the time it was completed and cost it had to bear till completion and achievement of objectives. As effectiveness is termed for best use of resources and abilities and avoid wastage of energies, time, and finances and well as resources, team effectiveness can only be gained while team members work in efficient and coordinated manner and their motivation levels stay high. The model in current study proposes that with shared leadership all team members get a chance to lead the team and bring their expertise to the table which gives them a chance to prove themselves. This keeps them on toes and develops a combined vision and goal to achieve as achievements are mutual. Trust acts as a vital factor in building best shared leadership practices thus creating a comparatively better environment for the team to achieve optimum performance levels.

### **5.3 Limitations of the Study**

Although the current study on shared leadership contributes to the literature in the field by filling some gaps but all aspects and factors, endogenous and exogenous variables, surrounding the construct could not be studied due to certain limitations

as covering all the elements in one study is not possible. Time constraints and scarcity of resources limited the scope of study to some extent. Although the variables of trust and team commitment could best be measured by using both qualitative and quantitative measures, yet in this study only quantitative data was collected. The study sample included project teams working in Pakistan but with time and resource constraints, not all the regions and cities could be accessed with even distribution and most of the teams working in big cities such as Islamabad, Lahore and Karachi could be accessed easily. So the data sample may not represent the even geographical distribution of project teams of Pakistan keeping in view the cultural impact of different regions, provinces and environments on shared leadership practices and building of trust among team.

## **5.4 Directions for Future Research**

Every research study opens up horizons and gives perspectives along with direction towards future research in the areas of focus. In this research, the impact of shared leadership on project team effectiveness was tested empirically yet it has unlocked many creative possibilities and ideas for future researches.

As study was focused on project teams working within geographical boundaries of Pakistan where vertical leadership is a traditionally accepted way in work environments, the impact of shared leadership (horizontal leadership) and vertical leadership both can be studied simultaneously to find the differences of both practices in project teams. Also in most of researches that shared leadership is considered to be practiced with transformational leadership strategies yet all the team members cannot naturally be transformational leaders as not all team members have same approach towards leadership. The shared leadership practices with team members using different leadership styles needs to be dug deep and researched upon. The culture and diversity also plays a vital role in shared leadership teams so they are suggested to be studied as mediator and moderators of shared leadership while

gender of the team members, work experience and expertise can also have a moderating impact while team commitment can be tested as a mediator instead of a moderator.

For future research, the sampling can be based on balanced sampling based on geographical distribution of project teams as well as adding qualitative data in the study as well. The data can be collected from team members with a perspective of a team leader and with another perspective of team member within shared leadership teams to find out the impact of leadership style of each team member.

## **5.5 Conclusion**

In current era of continuously changing work environments and practices with emerging trends of project based organizations, it is important to discover the ways through which project teams can gain high efficiency and effectiveness. In order to find out the same, this study is based on research on shared leadership practices which positively impact team effectiveness through trust among team members. The findings were in line with proposed hypothesis except the fact that team commitment does not have a significant impact as a moderator on relationship between shared leadership and team effectiveness in mediated moderation while trust mediated the association. The study was focused on project teams functioning in Pakistan while 308 responses were recorded through questionnaires in order to collect quantitative data. The data was recorded and analyzed statistically to generate results. SPSS was used for correlation, linear and multiple regression analysis while Hayes PROCESS was used to test moderated mediation. Positive relations were discovered between shared leadership and team effectiveness through trust while team commitment did not have significant effect on the model as moderator thus four out of five hypotheses were approved while one was rejected. Thus it was proved that shared leadership has a positive significant relationship with team effectiveness through trust as a mediator while team commitment does not play a significant role on the relationship as a moderator.

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# Appendix A



## CAPITAL UNIVERSITY OF SCIENCE AND TECHNOLOGY, ISLAMABAD

Department of Management Sciences

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### Questionnaire

Dear Participant,

I am student of MS Project Management at Capital University of Science and Technology (CUST) Islamabad. I am conducting a research on impact of shared leadership on team effectiveness, in project teams, with mediating role of trust and moderating role of team commitment.

You can help me by completing the attached questionnaire that you will also find interesting too. I appreciate your participation in my study and assure that your responses will be kept confidential and will only be used for educational purposes.

Sincerely,

**Irum Khan**

Capital University of Science and Technology, Islamabad

Carefully read the questions on the front and back of this sheet and answer them to the best of your ability.

### Gender

1	2
Male	Female

### Age

1	2	3	4
20-30	31-40	41-50	50 onwards

### Qualification

1	2	3
Intermediate or Equiv.	Graduate or Equiv.	Post Graduate or Equiv.

### Experience

1	2	3	4
1-3	04-06	07-09	10 years onwards

### Project Time Period

1	2	3
< 1 year	1 2 years	>2 Years

Please read each statement, decide how much you agree, and write your response in the space next to the statement using the scale below. Answer every statement, even if you are not completely sure of your response.

**1 = Strongly disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree**

### Shared Leadership Questionnaire

		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
1	My team members encourage me to work together with other members of the team.					
2	My team members and I work together and discuss what my performance goals should be.					
3	My team members encourage me to search for solutions to my problems without help from myteam leader.					
4	My team members advise me to look for the opportunities contained in the problems I face.					
5	My team members encourage me to develop myself.					
6	My team members encourage me to seek out educational opportunities.					
7	My team members urge me to reward myself when I have successfully completed a major task on theline.					
8	My team members encourage me to treat myself when I do a task on the line very well.					
9	My team members urge me to work as a team with other members.					
10	My team members and I reach agreement on my performance goals.					
11	My team members encourage me to find solutions to my problems without their input					
12	My team members encourage me to view unsuccessful performance as a chance to learn.					
13	My team members encourage me to develop my skills and abilities.					
14	My team members encourage me to learn by challenging myself.					
15	My team members encourage me to give myself a pat on the back when I successfully meet a new challenge.					
16	My team members advise me to coordinate my efforts with other team members.					
17	My team members work with me to develop my performance goals.					
18	My team members advise me to solve problems when they pop up without always getting a stamp of approval.					

		1	2	3	4	5
19	My team members urge me to assume responsibilities on my own.					
20	My team members urge me to think of problems as opportunities rather than obstacles.					
21	My team members encourage me to seek out opportunities to learn					

### Team Effectiveness Questionnaire

		1	2	3	4	5
1	My knowledge of tasks is very clear.					
2	I am satisfied with quality of work of my team.					
3	I am satisfied with quantity of work my team is producing					
4	My team members are not reluctant to take initiatives					
5	Interpersonal skills of my team are up to the mark					
6	My team is efficient in planning and allocation of tasks					
7	My team members commitment to the team is up to the mark.					
8	My team is overall performing in a very effective manner.					

### Trust Questionnaire

		1	2	3	4	5
1	My team members have high degree of trust among each other					
2	My team members believe that others on the team will follow through on their commitments					
3	My team members always do what they say they will do					
4	My team members trust each other to contribute worthwhile ideas					

### Team Commitment Questionnaire

		1	2	3	4	5
1	I really feel like this teams goal are my own.					
2	I feel emotionally attached to this team.					
3	I feel a sense of belonging to this team.					