

CAPITAL UNIVERSITY OF SCIENCE AND
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**Impact of Project
Communication on Project
Success with Mediating Role of
Trust and Moderating Role of
Authentic Leadership**

by

Haleema Majeed

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

in the

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Dedicated to the people I love and admire...My Parents.



CERTIFICATE OF APPROVAL

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Then which of the Blessings of your Lord will you deny.

(Surah Ar-Rehman)

First, to my creator, my life coach, the most gracious, the most benecent, ALLAH S.W.T, I owe it all to you, Thank you!

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Abstract

The present study focuses on the impact of project communication on project success with the mediating role of trust and moderating role of authentic leadership. Data was collected from construction industry of twin cities of Pakistan through questionnaires. Total 350 questionnaires were distributed from which 245 responses came back and used for data analysis. Results indicate that project communication is positively associated with project success; trust mediates the relationship between project communication and project success. Results also confirm the moderating role of authentic leadership is strengthening the relationship between project communication and trust. Implications of these findings are also discussed along with the future directions.

Keywords: Project Communication, Trust, Authentic Leadership, Project Success.

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Abbreviations

AL	Authentic Leadership
DV	Dependent Variable
IV	Independent Variable
PC	Project Communication
PS	Project Success
SPSS	Statistical Package for Social Sciences

Chapter 1

Introduction

1.1 Theoretical Background

Projects are temporary endeavor of any organization that is intended to attain any specific goal and objective. According to Project Management Institute (2013), projects have two distinctive characteristics, that projects are temporary in nature and have a fixed or predicated period of time with having new and unique set of objectives to achieve. Time, budget and performance are the main criteria upon which project management success is relay. Project is considered to be successful if it meets the requirement and perform accordingly to get success (Avots, 1969; Atkinson, 1999). In the project environment operations of a project teams become highly competitive, team members have to meet deadlines and manages different tasks or project at the same time (Mohammed & Alipour, 2014; Siddiquei, Fisher, & Hrivnak, 2018).

Project success is a much broader concept, many factors play significant role in project success (Serrador & Turner, 2015). As many factors influencing the success of a project; leadership, teamwork as team collaboration and communication, are associated to project success (Yanga, Huang & Wua, 2011). Projects are of different types; complexity, uniqueness success and size of a project vary from project to project (Muller & Turner, 2007). Moreover Meng and Boyd (2017) stated that project success is concluded differently by stakeholders and individuals.

In order to complete the project and attain the desired outcome project must be handled and supervised properly. Many factors influence the success of a project and for the desired outcome project must meet the time, cost and schedule constraints of the project but many researchers neglect the importance of schedule which is one of the important pillars in the triangle of project success which is mentioned in project management literature. For the success and effectiveness of the project leader must have to choose the leadership style from the different styles of leadership to carry out the process efficiently. A project requires different ways of communication because they are unique in nature, temporary and have different dynamics (Prencipe & Tell, 2001).

To achieve success team members of a project must work with traits which create synergy and collaboration in the team in order to accomplish the end goals (Abrantes et al., 2018). By this project team performance and level of success will enhance (Aga et al., 2016). The outcomes of project success are established by the team where team leader approved it. Team members are said to be the backbone for the success of any project (Anantatmula & Rad, 2018). Furthermore, leader and the members are considered to be two main aspects which play significant roles in success (Ilgen, Hollenbeck, Johnson, & Jundt, 2005; Podsakoff, MacKenzie, & Podsakoff, 2012). Project team members must possess variety of skill and specialized skills which are required to succeed and to enhance project performance (Iqbal, Anwar, & Haider, 2015).

Many aspects and skills of the members of a team influence the team, interpersonal skills and behaviors have an impact on the relationship between team members and the leader and also have an impact on the relationship among the team members (Driskell, Salas, & Driskell, 2018). Communication is an activity in which project team members exchange information with each other and an interactive process of sharing information by creating understanding (Wu, Liu, Zhao & Zua, 2017). When there is communication which creates harmony within the group of people which is said to be a team to achieve mutual goals. (Ryan & O'Connor, 2013).

To reduce risk and uncertainty of projects, project teams have to communicate in the best way to create coordination and attain the set targets (Hsu et al., 2012).

In fact, many researches establish that communication is a key factor in project success, enhanced and higher level of communication among team members will improve the performance and success of the project (Pinto & Pinto, 1991).

Poor communication, poor management and less involvement are some of the reasons for the project failure. Communication must be done in effective and efficient way not only with the frequency in flow of information but quality of communication is much serious matter in team performance (Oetzel, 2017). Project communication decreases the probability of occurrence of mistakes. By deploying effective communication from the beginning of the project it helps in decision making, increase the information sharing related to project, fills the knowledge gaps and ultimately enhance the unity among project team (Russ et al., 2013).

Huge projects exchange massive amount of information in different ways and to be successful communication is needed (Butt, Naaranoja & Savolainen, 2016). Through communication role become clear which ultimately develops trust (Henderson, Stackman & Lindekilde, 2016). With the increase of communication in a project team chances of confusion are lesser and also reduce misunderstanding which results positive outcomes in a project (Henderson, Stackman & Lindekilde, 2018). Previously discover that communication plays a vital role in project success. Effective Communication helps in developing consistent project teams along with project learning and trust (Yap, Abdul-Rahman & Chen, 2017).

Trust is a combination of positive expectations and willingness to accept liability which depends on others (Chughtai, Byrne & Flood, 2014). Trust eases the teamwork and develops trustworthiness upon which team performance is based. Trust eliminates the negativity on the bases of which positive results can be ensured (Benitez-Avila, Hartmann, Dewulf & Henseler, 2017).

Trust is one of the tools used to increase the relationships like relationship between leader and follower. Trust unites followers' observations about their workplaces and can possibly establish a significant change for organizational results as well as project outcomes (Liden, Wayne, Liao, & Meuser, 2014). Trust has impact on many outcomes of a project in different ways. Communication, trust and synergy

are factors of human dimension which are important to determine the project success. Likewise, trust established through communication and communication is vital for project success (Pinto, Slevin & English, 2009).

Similarly, project success, project effectiveness and exchange of knowledge and information are forecasted through trust (Rezvani et al., 2016). Group performance can achieve through the appliance of trust, whereas, authentic leadership can lead to follower performance in a way that leader endorse their true selves and respect personal values (Leroy, Anseel, Gardner & Sels, 2015). Leaders inspire individual or group of individuals to accomplish goals through common efforts (Northouse, 2007).

Leader plays an important role in the project success. Leadership styles have different styles which impact projects differently. As it is previously established that leadership style has great impact on project success (Kendra & Taplin, 2004; Yang, Huang & Wu, 2011). In complex project scenario where resources are limited and have time constraint in order to meet the targets with scarce resources, in such projects leadership play a significant role to achieve success in the project (Dwivedula, Bredillet & Muller, 2016). In order to succeed leader must indulge him in the project.

Trust in leadership is essential for the team for continuous development through their devotion which brings changes in daily practices and processes. Trusted leadership develops the sense of accountability and liability of the outcomes which motivates team member to work harder (Piccolo & Colquitt, 2006). Trust plays a vital role in resolving the issues emerges at any level of the project which may related to planning, execution or governance this will enhance the chances of success in project.

Trust will bring positive impact and also enhance task performance by ensuring the attributes like loyalty and reliability in the attitude and behaviors of the individuals. Task Performance is increased in trustworthy environment because in the harmonized situation members deal with one another in polite way, understands others problems, try to help each other and develops friendly and fair environment which reduces the injustice.

Role of leader is very much important in relation to his team. Leader has great influence on project members and also makes common efforts in order to accomplish the goals. Trust is positively linked with the leader behavior and the team members. Trust in leader helps in developing social exchange through with team members individually participate in tasks. As it is previously established by Mayer and Gavin (2005) when individual is motivated for trusting his supervisor or leader this creates a sense of confidence in carrying out the task so they can achieve a high level of performance.

Psychological perceptions of employees affect their behaviors with the organization and the leader, supervisor or leader plays a significant role to develop employee perception of trust and self confidence and also empower the employee to form a healthier relationship (Sluss & Ashforth, 2007). Trust in leader generates a strong bond between the members and its leader and also strengthens their relationship through which better performance is achieved (Brower, Lester, Korsgaard & Dineen, 2009). According to Jong and Elfring (2010) team effort and coordination arbitrates the relationship between team members and their leaders which leads to the effective performance by generating trust among team members.

Leaders or managers when develop a trustful relationship with team and team members, contribution of team members increases along with the experience, expertise and become more responsible toward their work. Through trust biasness is minimized whereas trust helps in maintaining the reputation (Raychan, Guo, Bao & Cho, 2014). When leader put their trust in team that creates positivity and also develop the feeling of integrity and unity by which relation and involvement become stronger this leads towards enhancement of task performance (Hauer et al., 2013).

In authentic leadership leaders emphasize fellow workers to learn new things and willingly communicate information and prepare workers to come up with innovative ideas, opportunities and challenges, also express true feelings and thoughts. Project success and team performance are influenced by authentic leadership and also affect group productivity (Lord & Brown, 2003). Authentic leader has characteristics to increase confidence and hope of members of a project and also boost

positive outcomes. Performance of employees is directly affected by authentic leadership through which probability of project success increased. Authentic leadership comprises by positive and transparent communication by attaining high level of trust among peoples and teams. Demonstrating authentic leadership through effective communication, one can transmit information freely and create better understanding which ultimately encourage employees (Jiang & Men, 2017).

Project Communication plays a vital role in project success whereas effective communication has significant role in creating understanding of objectives and also creates synergy in project team. On contrary, if communication is not effective than it might involve the element of risk (Muszynska, 2015). Project success depends upon the trust and positive relation among the manager and the team. Trust eliminates uncertainty and enhances communication which ultimately increases the probability of success. On contrary, lack of trust effect the flow of information and generate negative feelings which lead to poor performance instead of getting success (Rezvani et al., 2016).

1.2 Research Gap

Several studies have been conducted on the effects of communication on project success (Yap et al., 2017). Communication plays an important role in project success but the role of communication varies (Aubert, Hooper & Schnepel, 2013). Different dimensions of communication affect the project success, however, some dimensions of communication influence project success positively and few dimensions influence negatively (Wu, Liu, Zhao & Zuo, 2017; Antony & Gupta, 2018). Wong, Cheung, Yiu, and Pang (2008) suggested that effective communication develops trust. Trust is the key factor for creating synergy which leads to project success. Ning (2017) also recommended that trust alone is not sufficient for project success. Furthermore, Chen and Lin (2018) mentioned that leadership has a significant influence the success of project and Leroy et al. (2015) identified that authentic leadership plays a moderating role. The literature is limited over identification of the moderating role of authentic leadership and mediating role of trust

on the relationship between communication and project success. Furthermore, Antony and Gupta (2018) suggested to conduct further research on communication and trust in different industrial setups. Therefore, current study will be conducted on to identify the moderating role of authentic leadership on the relation between project communication and trust and mediating role of trust on the relationship between project communication on project success.

1.3 Problem Statement

In Pakistan several projects are failed because of communication issues (Riaz, Attaullah & Buriro, 2018). Project communication practices not only have a positive impact over project success, but also influence trust, which in turn is related to project success. Furthermore, leadership also is one of the major causes of project failure. Considering the failure rate of projects in Pakistan the current study is being conducted in order to analyze the mediating impact of trust and how authentic leadership moderates the relationship between project communication and trust.

1.4 Supporting Theory

Several theoretical perspectives have been presented by different researchers, which are used worldwide to support the study of project success. Current model finds theoretical support in communication visibility theory and all of the four variables used in this model are covered by this theory. Communication visibility focuses on whether information about communication practices, connections, channels, and content is available and accessible (Berkelaar & Harrison, 2017).

When communication practices are more visible, team have a more accurate sense of who knows who, who knows what, and who is doing what (Leonardi, 2014), which create better understanding and clarity of work and ultimately leads toward project success. This theory explains that communication visibility in organizations and projects can build trust through communication which leads to project

success. The motive of this study is to find out the importance of communication to build trust and make project success.

1.5 Research Question

The present study intends to find out answers of the following questions by keeping in view the abovementioned problem statement:

Research Question 1:

Do ‘Project communication’ affect ‘Project Success’?

Research Question 2:

Does trust mediate the relationship between ‘project communication’ and ‘Project Success’?

Research Question 3:

Does authentic leadership moderate the relationship between ‘project communication’ and ‘trust’?

1.6 Objective of the Study

The aim of this study is to find the impact of communication on project success with mediation role of trust where as authentic leadership is a moderator.

The objectives of the study are: To find the impact of project communication on project success along with mediating impact of trust on the relationship between project communication and project success and at the end to find the role of authentic leadership as a moderator between the relation between project communication and trust.

1.7 Significance of the Study

Research shows that, for a successful project, trust is an essential ingredient to create open communication and reduce uncertainty (Brinkhoff, Ozer & Sargut,

2015). Therefore, it is important to identify and understand such factors that can support project success. Although previous studies have made a very important contribution to extending our understanding of project success, we strongly believe that some important aspects are neglected that prevent us from knowing more about what happens in the project context. For this reason, we attempt to propose a more suitable explanation for underlying changes in project management studies and practices. As it is established that high level of authentic leadership can create strong relationship between trust and commitment (Xiong, Lin, Li & Wang, 2016). However, the objective of the current study is to analyze the effect of authentic leadership on project communication and trust which increases or ensure the probability of a project success. As it is examined, that effective communication and trust are associated with the project success (Parka, Lee, Lee, Truex, 2012). That is why it is important to understand the link between trust, project communication and authentic leadership with project success.

Chapter 2

Literature Review

This chapter highlights the implication and relation of communication, project success, trust and authentic leadership. And how project success can be influenced by different factors. Among these influencing factors how communication and trust affect the success of a project. Several studies have been done to determine a gap in the literature. Moreover, this chapter established an understanding of the suggested conceptual framework, along with the hypothesis development for the current study.

2.1 Relationship between Project

Communication and Project Success

Over the past years, it has been established that project success is based on variety of factors. Those diverse factors will be applicable on throughout the project and effecting the success but still frequency of project success is uncertain (Joslin & Müller, 2016). There are different methods of evaluating the success of a project with respect of different people. Project management literatures focuses on the triple constraint which are cost, time and schedule in order to succeed in a project. As it is discussed that success of a project is dependent upon immense number of factors, which can affect the project performance differently and having different impact on project success as well. Because of the diversity in influence and impact,

all the factors are not equally important (Todorović, Petrović, Mihić, Obradović & Bushuyev, 2015).

Project success is framed by the criteria of need and expectations whereas satisfaction also plays a vital role. Project success is not only being measured on the scale of time, cost and schedule but it now surrounded by immense number of diverse factors which would become the reason or cause of effecting the success of a project. Another important aspect for a project to be successful is the quality of work. Success is determined by the level of efficiency or in other words the level of achievement of the objectives along with the fact that how those objectives will be achieved (Baccarini, 1999). Project success is measured through the objectives of a project. A project is successful when it achieves its objectives. Whereas, success factors are those factors which are directly or indirectly had impact on the success of a project (Davies, 2002).

Effective completion of project leads toward the success. Success of any project is depending upon different factors and aspects like many project face failure because planning is not done properly at the initial stages of the project. Project is a one time and unique endeavor; the chances of failure at any level of the project as in planning, execution or in operations are more than the success.

Project success is much broader term which is influenced by different factors. According to project management institute project success has three constraints such as time, cost and schedule but there are many other factors while working in a project which are considered to effect the success, internal and external environment of organization is one of the aspect which effect the success and also effect the performance and the outcome of the project (Papke-Shields, Beise, & Quan, 2010).

In this age and time, there is need of innovation and rapid development in the projects in order to compete with new trends in this complex, growing and competitive market and effective relationship is required between project team members to meet the growing market trends. Project success is achieved with well-coordinated and collaborative teams and team collaboration and coordination is enhanced when team have effective communication by the both means formal and

informal through best possible communication channel ensure and increase the exchange of important information whenever required and needed (Pinto and Pinto, 1990).

Exchange of information, opinions and feelings are explained under the term communication this exchange can be verbally or nonverbally or both, the efficiency of communication channels between the teams of the team members exemplified the effectiveness of the team performance and collaboration of the team (O'Daniel & Rosenstein, 2008). Project communication plays a vital role in managing the project team and also become a factor to reduce differences among project members (Aga et al., 2016; Wang & Howell, 2010). To increase and improve the performance of project team communication must be effective, communication must be done in a way that information can be easily received and interpret by both the receiver and the sender so they can take decisions and act accordingly (Harris & Sherblom, 2018).

Project communication provides the channel which allows the exchange and distribution of information among project members so they can develop a relationship through these communication channels which can be verbal and nonverbal. Probability of the success increases when the flow of communication improved and exchange of knowledge is done on regular basis with in the project team this will also increase the performance of the team (Patrashkova, Volzdoska, McComb, Green & Compton 2003).

Project communication allows the project team to exchange information by verbal and nonverbal means and clearly send or receive information from project team. When team members exchange the knowledge through effective communication as the result it improves the operations and functions of the project team and also enhance quality in team (Sullivan & Gee, 2007). As the relation of communication and success it is previously discovered that regularity in the communication will increase knowledge sharing among the individuals of the team and also improve their performance, and provide an open platform to interact more, exchange additional information related to problems and find solutions to such problems (Patrashkova et al., 2003).

A project team is defined as a group of individuals who must communicate in well harmonized manner to achieve shared values and goals (Ryan & O'Connor, 2013). Communication is one of the success factors which create a network and provide all the essential data to the project members (Pinto & Prescott, 1988). Project team which communicates more frequently leads to improve project performances (Katz & Tushman, 1981). Project performance is achieved when all the required and necessary knowledge and information is kept by the project members so they can accomplish the goals and succeed in the project (Mathieu, Hollenbeck, van Knippenberg, & Ilgen, 2017).

Project communication is a key factory while measuring and understanding project success (Davis, 2017). In global context communication gap is considered as challenge in projects (Stapel, Knauss, & Schneider, 2009). Lack in project communication can cause delays in projects and also leads to failure (Urdangarin, Fernandes, Avritzer, & Paulish, 2008). A strong relation will develop through communication which provides help in decision making and also establish a sense of commitment. Communication (among the all the influencing factors) is an important factor in the project success which effect the entire project from its start to till end (Park et al., 2012).

Communication ensures understanding among project team members which leads to accomplishment of the objectives of project on time and in effective way by also increases the project performance which ultimately leads to project success (Henderson, Stackman & Lindekilde, 2016). Regular communication will enhance the exchange of information across team members of the team by which more information can be utilized by team members to increases team performance (Allen, 1970). Through communication and trust among parties will increase the likelihood of success (Ragatz, Handfield, & Scannell, 1997). This study will contributed the impact of project communication on project success by discussing their positive relationship that project success is depended on project communication which reflects that increase in project communication will also increase the chances for a project to be successful. On the basis of these points we concluded that:

H1: project Communication is positively linked with project success.



2.2 Mediating Role of Trust Between Project Communication and Project Success

A project is said to be successful when achieve its set targets or goals by applying appropriate strategies which are relevant to the product or service of an organization. Whereas, management team is successful by achieving set targets or goals within the cost and end result is up to the required quality (Muller & Turner, 2010). Project will be successful with the successful management whereas, practices of human resource plays vital role in project success.

Project communication is the vital part to create coordination and work as motivator to achieve the performance. Effective working of a project team requires innovative skills, proper distribution of tasks, develop trustworthiness and eliminating the barriers of communication which ensures the success (Berry et al., 2009).

Trust is described as assurance in other people's actions and words. Trust signifies positive expectations about motives and intensions of other parties. Trust comprises of probability and also on peoples who will agree to face risk and uncertainty (Jiang & Probst, 2016). Trust can be defined as the state that accepts liability and positive expectations will also emerge through trust. Moreover, trust ensures the exchange of knowledge, information as well as of the resources which would be a safeguard in attaining the high level of project performance along with these trust extent the level of benefits among team members by increases the capability, reliability and goodwill among the team members and also provide assistance in calculating risk (Ning, 2017).

Trust is associates with the willingness of become genuine and behave helpful with others. Trust is linked with learning along with many other factors. The approach toward trust comprises with qualities and proficient feelings (Rousseau

et al., 1998). And the feelings which are associated to trust are generally positive in nature (Frederickson & Joiner, 2002). For instance arrogance and annoyance are negative in nature and cannot establish trust.

Trust is based on communication and also increases through communication norms. Trust will develop rapidly when communication is effective, on time, expected and as well as shared in teams. In other words trust is essential for communication. Trust reduces the uncertainty which leads to increase the performance. Trust and communication are interlinked and collectively both will influence the performance (Henderson, Stackman & Lindekilde, 2016).

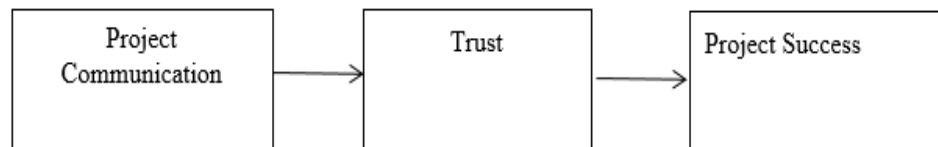
Trust will immediately emerge through communication which is relevant, timely and socially accepted. Through both trust and communication feeling of uncertainty and ambiguity will reduce at different levels of team. Trust and communication will work parallel with in the project and project team. Trust will directly influence the impact of communication with respect of project performance and satisfaction (Henderson, Stackman & Lindekilde, 2018).

Trust had different meaning and impact in different context. Impact of trust is depending upon the team and the environment. With the appliance of trust, it ensures many outcomes such as project performance, exchange of information and knowledge and many others, which positively contributes toward the success of a project (Buvik & Rolfsen, 2015). In the previous researches it is documented that trust is vital in success. Trust is positively associated with the project success. There were several ways to attain high level of project performance; trust is one of the approaches to achieve high level of project performance and outcomes. As it is established that only trust is not adequate for the success of a project (Ning,2017). This study will contributes that how trust along with communication will assist the project success.

Literature emerge the importance of trust on project success. Higher level of trust will increase the probability of project success; stronger relationship have positively influence the project success. Project success involves number of factors; trust and communication are one of them. Trust established through communication whereas communication plays vital role in the success of a project (Pinto,

Slevin & English, 2009). In view of above mentioned we conducted this study to determine that communication effect trust and trust effect the project success thus, how communication effect project success through trust. Therefore, we hypothesized:

H2: Trust mediates the relationship between project communication and project success.



2.3 Moderating Role of Authentic Leadership between Project Communication and Trust

In the field of project management project success is one of the discussed and studied topic but the standard for success varies to nature of the project and from person to person with the accordance of need (Ranawat, Bhadoriya, & Trivedi, 2018). To achieving the success in a project management plays a vital role in which project manager or leader must possess filed related skills and have appropriate knowledge to acquire the goals, as it is studied before that the relation of leader with his team effect the success of a project and the positive and healthy relation will develop synergy and enhance the performance (Alias, Zawawi, Yusof, & Aris, 2014).

Leader provide the work related details to the employees which are required to carry out the project and update the employees and clear the tasks which are need to be done for the completion of the project. Project leader is the one who leads the project, motivate his team and distribute the work to the best suitable member for the specific work to ensure the perfection of the work because success and failure of a project lies on project leader along with the performance of his team who is working under his supervision.

Leader is successful when he pays attention on the problems of his team, in order

to be successful leader must have to develop trust with in the team. An open communication where one listens to the problems of his teams or fellow workers in such environment trust will emerge (Lloyd, Boer & Voelpel, 2015). Trust create better understanding between leader and his team and also influence the behavior and attitudes of the members of the project team. As level of trust increases the relationship of the team and leader get stronger.

Trust is one of the factors which create high quality relationship between individuals and their leader, to which degree trust is developed within the individuals of a team on the basis of that one can take words, actions and decisions on the basis of another. Trust in leader will increase the level of satisfaction and commitment. Self-expression and confidence in the performance of team members are also boosted when they have high level of trust in their leader (Li & Tan,2013). In the presence of trust and good governance or high quality leadership it maintains relationship between the leader and team for long period of time.

Leadership has many different styles such as transformational leadership, servant leadership, ethical leadership and authentic leadership. Transformational leadership is most studied variable in research. Transformational leadership emphasis on performance and outcome at individual and organizational level (Liu, Siu, & Shi, 2010). Servant leadership is defined as a natural feeling to serve others or needy ones (Greenleaf, 1998). There are seven dimensions of servant leadership have been found which are also explained as characteristics of servant leadership which are authorization, conceptual skill, emotional healing, putting and helping subordinates, behave ethically and value for community. Servant leadership also has ability to enhance performance and increase motivation.

In the domain of project management many studies have been done to find out the factors which influence the project success in which leadership and leadership styles are identified as an important element in the success, styles of leadership which are considered to effect are transformational leadership, abusive supervision, authentic leadership, over-controlling leadership and passive leadership (Balliet & Ferris, 2013) but further researches are required to identify more approaches and more relevant approach for making a project successful. One of the studies reveals

that authentic leadership and transformational leadership are not always having negatively associated with the project success (Bakker, Boro s, Kenis, & Oerlemans, 2013).

Ethical leadership is based on personal actions and relationships through appropriate conduct and promotes open communication, decision making and strengthening relation between members through such conduct. The process of ethical leadership influence project members through principles and values. Concepts of transformational and authentic leaders are different. Transformational leaders prepare their follower to become in a leader role (Avolio, 1999). Avolio and Gardner (2005) authentic leader focuses on develop a sense of own ability and decision making in their followers. Leader may not have always a positive impact on performance but leadership style has played a vital role in success of an organization or a project. Correa, Morales and Pozo (2007) suggested that leadership styles such as servant, transformational, authentic leadership and ethical plays significant role in organizational success.

Literature defines authenticity as owing own personal experiences. Authenticity also refers to act accordance with one's true beliefs and thoughts. It is documented that people cannot be completely authentic or inauthentic but a range of both. Authentic leadership is based upon core of one's personality and is consist of four key elements which are self-awareness, unbiased processing, authentic action and relational transparency. Through these elements of authentic leadership; clarity, increasing productivity, reduces exaggeration and distortion will attain (Luthans, Norman & Hughes, 2006).

As it is already discovered that authentic leaders have ability to influence the behavior and attitude to their followers. Authentic leaders can also affect the behavior and attitudes more powerfully and successfully of their followers if they are well aware of the believes and values of their follower. Authentic leadership has indirectly influence on the self-identities by observing the working patterns in a way that affect the self-concepts of their followers (Lord, & Brown, 2004). Authentic leadership is concerned how one is going to handle the problems according to the value set.

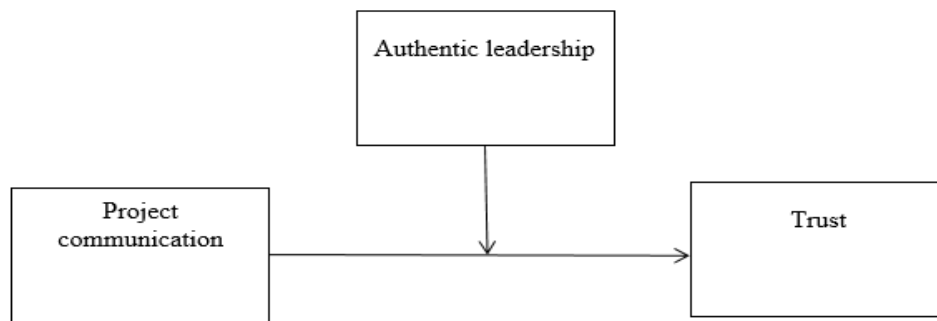
Authentic leadership is surrounded the positive abilities such as confidence, flexibility, hope and optimism. Moreover, that many other features are associated with authentic leadership. Authentic leadership is characterized by the criteria of high moral and ethics which provide assistance in decision making (Walumbwa, Avolio, Gardner, Wernsing & Peterson, 2008). Authentic leadership creates long lasting effect by establishing durable relationships; work with passion, by putting all their whole efforts and with accordance to the values in order to get the desire outcome (George, Sims, McLean & Mayer, 2007).

Authentic leadership affects a project in various ways. Leader has quality to build teams and groups which help them gaining success. An authentic leader is able to communicate with team members in accordance to the norms leading them to success. Leader has an ability to develop communication among the fellow workers. Such leaders help teams to develop leadership qualities to make project successful (Walkera & Walkerb, 2011). Pervious findings demonstrate the link between authentic leadership and project success. As it is reported that leadership requires communication to build relationship among peoples, as it plays a very important role, and through this trust will developed. Authentic leadership has a strong relationship with trust and communication and also creates sense of commitment. Authentic leadership develops trust with in the project groups. Good leadership develops a chance for discussions and communication between project members which help them to establish mutual goals (Walkera & Walkerb, 2011). These discussions are helpful to state their opinions and helping them in good communication which beneficial in project success.

Communication and trust are interlinked; in authentic leadership both plays a significant role. Whereas, the level of communication is associated with authentic leadership and trust is also highly relevant to authentic leadership (Walkera & Walkerb, 2011). As it develop earlier that communication is key to develop trust, leader is liable to share the information and communicate with the team to solve the problems which may impact the project negatively and also to generate new ideas in order to accomplish the goals and make project successful. All these points comprises that in the presences of authentic leadership the relation between

project communication and trust is strengthened which ultimately leads towards the project success. Therefore, we hypothesized:

H3: Authentic leadership moderates the relationship between project communication and trust such that it strengthens the relationship between project communication and trust.



2.4 Research Model

The object of this study is to examine the direct impact of project communication and project success, with considering the moderating influence of authentic leadership and mediating role of trust. In this model of research project communication is an independent variable, dependent variable will be project success, trust is mediator and moderator will be authentic leadership.

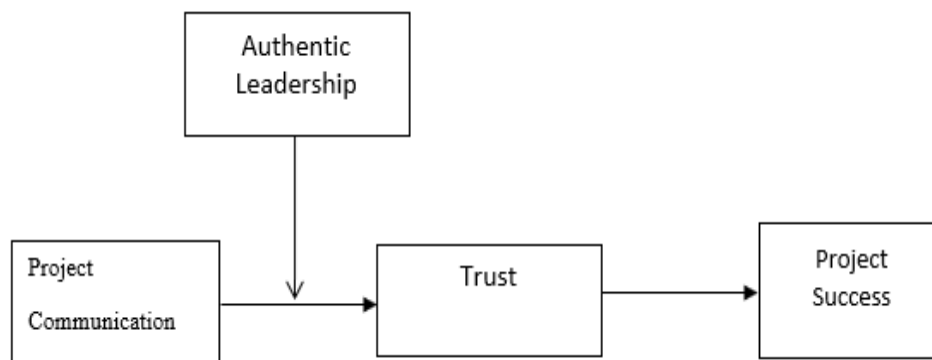


FIGURE 2.1: Research Model

Chapter 3

Research Methodology

In this part we discuss details regarding the collection of data and the procedure involved in doing so. This will help in examining the relation of project communication and project success with mediation of trust and moderation of authentic leadership. In this chapter research design, sample and sampling technique, Population and sample, instrumentation, reliability analysis, statistical tool, sample characteristics and data analysis techniques will be discussed.

3.1 Research Design

An extraordinary research design encourages experts to get surprising results; likewise it helps in raising estimation of the assessment. Commonly, in humanistic systems two research design techniques are there known as "quantitative methodology" and "subjective methodology". Predominant piece of investigators hold conviction that quantitative research is continuously reliable and effective when stood out from abstract research structure (de Vaus, 2001). Research arrangement is described as the demonstration of conditions for data social event and assessment in such a manner, that objective is to blend congruity to the investigation point with economy in system (Selltiz et al., 1960).

For the present research, support is assembled from quantitative research arrangement by utilizing regulated frameworks and devices as it supports strong data

by changing recognizable reality into numbers. Besides, survey system was executed to gather information that includes the usage of questionnaire comprising of demographics which are qualification, age, gender and experience.

3.1.1 Type of Study

The current study is focuses on identifying the influence of project communication on project success with mediating role of trust and moderating role of authentic leadership. Target population for this research is construction industry. At first 350 questionnaires were distributed from which 245 responses came back. The chosen sample symbolizes the entire population of Pakistan and will help in generalizing the results.

3.2 Unit of Analysis

Unit of analysis is considered as the most important element in research study. The impact of project communication on project success is studied. In this case, the managers, supervisors of the construction industry were taken as the unit of analysis.

3.3 Population and Sample

Population for this research consists of managers, project managers and site supervisors working in different construction industries. The population of the study includes private and public sector of construction companies operating in the twin cities of Pakistan. Hence, for this research, data was obtained from different construction industries. 350 questionnaires were distributed from which 245 responses came back and were used for analysis. Data was collected for four variables namely project communication, project success, trust and authentic leadership. The results were then analyzed to get the desired outcome.

3.4 Sample and Sampling Technique

It's commonly hard to gather information from the entire population because of certain confinements for the time being and asset shortage. Sampling is the ordinarily utilized software for the collection of data. For this, a particular gathering of individuals are picked that are the genuine delegates of the whole population. For the present research, construction industries of Pakistan were focused on. 350 managers were approached from different construction industries for data collection and 245 responses came back through both online questionnaire and visited different construction based offices in Rawalpindi and Islamabad and explain the purpose for collecting the data also ensure that the information will kept confidential and used for research purpose only. The technique used for data collection is convenience sampling technique.

3.5 Sample Characteristics

Characteristics used in this research are managers and site supervisor's age, gender, qualification and experience. Following are the characteristics of the sample:

3.5.1 Gender

Demographics consist of an essential element which is gender. It underlines the significance of sex uniformity just as separates the degree of male and female in referenced population test. In our investigation, we very much attempted to support the degree of sex correspondence, in any case however it was seen that the proportion of male members was more than the proportion of female members.

TABLE 3.1: Gender Distribution

Gender	Frequency	Percent
Male	140	57.1
Female	105	42.9
Total	245	100

Table: 3.1, demonstrates the gender distribution of the given sample. According to this distribution 57.1 % were male whereas 42.9 % were female. This shows that the ratio of males was higher than females.

3.5.2 Age

Age is considered as one of the socioeconomics, to which respondents at times do not feel convenient to uncover straightforwardly. Thus, for the comfort of respondents, scale was used to gather data with respect to their age.

TABLE 3.2: Age Distribution

Age	Frequency	Percent
18-25	106	43.3
26-33	97	39.6
34-41	33	13.5
42-49	9	3.7
Total	245	100

Table: 3.2, represents age distribution of the sample. 43.3% respondents were having age between 18-25 years. 39.6 respondents were having age between 26-33 years. 13.55 respondents were having age ranging between 34-41 years and only 3.7% respondents were having age ranging between 42-49 years. In this research, majority of respondents had their age ranging between 18-25 years.

3.5.3 Qualification Distribution

Education is a significant component which contributes towards the success of the entire nation and it is likewise the fundamental need of an individual. Consequently after gender, qualification is another powerful element of the socioeconomics. Education opens up numerous new and remarkable ways for progress and innovativeness in request to increase upper hand among the various nations around the world.

TABLE 3.3: Qualification Distribution

Qualification	Frequency	Percent
Inter	68	27.8
Bachelor	56	22.9
Master	100	40.8
MS/PHD	21	8.6
Total	245	100

Table: 3.3, represents the qualification distribution of the sample. 27.8% individuals were having inter degrees. 22.9% individuals were having bachelor's degrees, 40.8% were masters qualified individuals, 8.6% individuals were having MS/PHD degrees. In this research mostly individuals were held master's degrees.

3.5.4 Experience Distribution

Again to gather data for estimating the experience of the respondents, different ranges of experience time span were made with the goal that each respondent can effectively show the particular control of their experience in the relevant field of work. Experience includes learning about the concerns of the organization and making strategies for better future of the organization.

TABLE 3.4: Experience Distribution

Experience	Frequency	Percent
1-5 years	148	60.4
6-10 years	64	26.1
11-15 years	25	10.2
16-20 years	8	3.3
Total	245	100

Table: 3.4, represents that qualification distribution of given sample. According to above distribution, 60.4% individuals were having experience ranging from 1-5 years. 26.1% individuals were having experience ranging from 6-10 years. 10.2% individuals were having experience ranging from 11-15 years whereas 3.3% individuals were have experience range in between 16-20 years. Most of the individuals were have experience range in between 1-5 years.

3.6 Instrumentation

3.6.1 Measures

Data was compiled with the help of questionnaires that were designed from different sources. 350 questionnaires were distributed in different construction industries out of which 245 questionnaires came back that were used for analysis. Questionnaires were distributed online to get quick responses along with personal visits to organizations. In light of past investigations, online collection of information is most simple and quick way of gathering information. It was simple for members to fill online as opposed to filling it physically. There is no effect on the idea of the information while utilizing any of the methodology referenced above (Church, Elliot, and Gable, 2001).

In the questionnaire the items included were: Project Communication (Independent Variable), Project Success (Dependent Variable), Trust (Mediator), Authentic Leadership (Moderator). All the items used five point likert scale for measurement which included 1 (Strongly Disagree), 2 (Disagree), 3 (Neutral), 4 (Agree) and 5 (Strongly Agree). It also includes variables of demographic like gender, age, qualification and experience. 350 questionnaires were distributed from which only 245 responses came back and were utilized for data analysis.

3.6.2 Project Communication

Communication plays vibrant role in each level of a project. Lack of project communication can create problems and ultimately leads to project failure (Pinto & Pinto, 1990). To measure this variable 5 Likert scale of 5 item is used. This scale was adopted from Roberts, Cheney, Sweeney and Hightower (2004). The items of the scale are: "Everyone participates", "Everyone has a chance to express their opinion", "We listen to each individual's input", "Members feel free to make positive and negative comments", "Even though we do not have total agreement, we do reach a kind of consensus that we all accept".

3.6.3 Project Success

“Project success is a topic that is frequently discussed and yet rarely agreed upon. The concept of project success has remained ambiguously defined. It is a concept which can mean so much to so many different people because of varying perceptions, and leads to disagreements about whether a project is successful or not” (Liu & Walker, 1998). Project success is not only being measured on the scale of time, cost and schedule but many other factors influence the success. For measuring project success 14 item scale is used. This scale was adopted from Aga and Vallejo (2016). The sample item is “The project was completed on time”, “The project was completed according to the budget allocated”, “The outcomes of the project are used by its intended end users”. “The outcomes of the project are likely to be sustained”, “The outcomes of the project have directly benefited the intended end users, either through increasing efficiency or effectiveness”, “Given the problem for which it was developed, the project seems to do the best job of solving that problem”, “I was satisfied with the process by which the project was implemented”, “Project team members were satisfied with the process by which the project was implemented”, “The project had no or minimal start-up problems because it was readily accepted by its end users”, “The project has directly led to improved performance for the end users/target beneficiaries”, “The project has made a visible positive impact on the target beneficiaries”, “Project specifications were met by the time of handover to the target beneficiaries”, “The target beneficiaries were satisfied with the outcomes of the project”, “Our principal donors were satisfied with the outcomes of the project implementation”.

3.6.4 Trust

Trust has different impact in different seniors and context. Trust improves the productivity of project and is a factor which effect success and linked with performance (Pollack & Matous, 2019). To measure this variable six item scale developed by Podsakoff et al. (1990) is used. Sample items include: “I feel quite confident that my leader will always try to treat me fairly”, “My leader would never try to

gain an advantage by deceiving workers”, “I have complete faith in the integrity of my leader”, “I feel a strong loyalty to my leader”, “I would support my leader in almost any emergency”, “I have a strong sense of loyalty toward my leader”.

3.6.5 Authentic Leadership

Leadership is important through all phases of the project life cycle and has direct relationship with project success. In order to measure authentic leadership Walumbwa et al., (2008) developed the measurement of authentic leadership, measurement tools consist 16-items scale, include Self-Awareness, Relational Transparency, Internalized Moral Perspective and Balanced Processing. Leroy, Anseel, Gardner and Sels (2012). Sample items include: “I am aware of why I do the things I do”, “I am aware what demotivates me”, “I am aware of what drives or motivates me”, “I am aware of what I truly find important”, “I’d rather not be confronted with my personal limitations and shortcomings”, “When someone criticizes me, I try not to vest too much attention to it”, “I’d rather not have my personal weaknesses exposed”, “I try to block out unpleasant feelings about myself”, “I often pretend to like something when I really do not”, “Even when I disagree with someone, I will often silently agree”, “I often behave in a way that does not reflect my true feelings or thoughts”, “I often pretend to be someone I am not”, “I stay true to my personal values”, “I act in accordance with what I believe in”, “People can count on me to behave in the same way over situations”, “I act according to personal values, even if others criticize me for it”.

TABLE 3.5: Instruments

No	Variables	Source	Items
1	Project Communication	Roberts, Cheney, Sweeney and Hightower (2004)	5
2	Project Success	Aga and Vallejo (2016).	14
3	Trust	Podsakoff et al. (1990)	6
4	Authentic Leadership	Walumbwa et al., (2008)	16

3.7 Statistical Tool

The link between independent and dependent variable which is project communication and project success was checked using linear regression. It clarifies the acceptance and rejection of hypothesis. Similarly both the links between project communication (IV) and trust (Mediator) and the link between trust (Mediator) and Project success (DV) was also tested with the help of linear regression.

For mediation and moderation analysis, Preacher and Hayes methods were used. For mediation analysis model 4 is used and for moderation analysis model 7 was used. In Both the cases, the independent variable (Project communication) is placed in the IV column, the dependent variable (project success) is placed in the outcome variable box for mediation whereas for moderation trust is placed in the outcome variable box, Demographics are placed in covariate box, and mediator and moderator is then placed in the M Variable box.

3.8 Reliability Analysis of Scales Used

Reliability analysis is the method in which same results occur repeatedly when items are tested. It shows that no matter how many times an item is tested, it will repeatedly show same results. Reliability analysis in this research was conducted using cronbach's alpha. Cronbach's alpha shows reliability analysis of all the variables and the link between those variables. Range of Cronbach's alpha is 0 to 1. When the value of cronbach's alpha is greater than 0.7 it is considered highly reliable and the value less than 0.7 is considered less reliable. However, in cases when there are less than 10 statements in a variable then reliability of 0.6 is also considered as good.

TABLE 3.6: Reliability Analysis

Variables	Cronbach's Alpha	Items
Project Communication	0.6	5
Project Success	0.77	14
Trust	0.72	6
Authentic Leadership	0.77	16

3.9 Data Analysis Techniques

The data was collected from 245 respondents. After the collection of data it was analyzed on SPSS software. The procedure adopted in analyzing the data is as follows:

1. First of all, the questionnaires that were filled properly were chosen for the data analysis
2. All the variables were given a specific code and then those coded variables were used for data analysis.
3. Frequency distribution was calculated in order to examine the sample characteristics
4. After frequency distribution, descriptive statistics were calculated.
5. Reliability of all the variables were tested separately using cronbach's alpha
6. Confirmatory Factor Analysis (CFA) was conducted in order to test the fitness of the model and to justify it.
7. Correlation analysis was conducted to check the link between variables and to know whether a significant relationship exists between the variables or not.
8. Linear regression test was conducted to know the link between independent variable, dependent variable and mediator.

9. Process macros of Preacher and Hayes were used to conduct mediation and moderation test in order to know that mediation and moderation exist between the variables or not
10. With the help of Preacher and Hayes Process Macros and Correlation analysis, it was found that whether the proposed hypothesis were accepted or rejected.

Chapter 4

Results

This section includes descriptive statistics which include mean, standard deviation, minimum and maximum values, Correlation Analysis, Regression Analysis, Mediation and Moderation. The results of the analysis will decide whether the hypothesis presented above will be accepted or rejected. For Analysis purpose SPSS software is used.

4.1 Descriptive Statistics

Descriptive statistics contain the standard deviation, mean, minimum and maximum values. It includes the summary of entire data. The averages of all the responses recorded are described as mean and change of responses from mean are described by standard deviation.

TABLE 4.1: Descriptive Statistics

	N	Minimum Value	Maximum Value	Mean	Standard Deviation
Project Communication	245	2.2	5	3.86	0.569
Project Success	245	3.36	5	4.23	0.344
Trust	245	2.33	5	3.92	0.588
Authentic Leadership	245	2.25	5	3.72	0.482

Table: 4.1, represents that the sample size for all the variables was 245. All the variables were tested on a five point likert scale ranging from 1 to 5 where 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree. Values of mean and standard deviation basically explain the understanding of individuals regarding each variable. The mean Value of Project Communication is 3.86 and its standard Deviation is .569. The Value of mean for Project Success is 4.23 and its standard deviation has a value of .344. The value of mean for Trust is 3.92 and its standard deviation is .588. The value of mean for Authentic Leadership is 3.72 and its standard deviation has a value of .482 respectively.

4.2 Correlation Analysis

Correlation Analysis is carried out in order to determine the link between two variables. The purpose of doing correlation analysis in this research is to find out the link between Project Communication and Project Success, Mediating role of Trust and Moderating role of Authentic Leadership in order to validate the presented hypothesis.

Pearson's Correlation is also known as Correlation Analysis. It demonstrates the link between two variables as well as the nature of their relationship. It ranges between - 0.1 to 0.1. If the correlation value is far away from zero it means link is strong whereas when the correlation value is closer to zero it means link is weak. No link exists when the value is equal to zero.

Negative and positive signs demonstrate the nature of link between two variables. Positive sign shows that link is direct and when one variable increases, it causes an increase in the other variable also. Whereas Negative sign shows that the link is indirect, increase in one variable is causing decrease in the other variable.

TABLE 4.2: Correlation Analysis

S. No	Variables	1	2	3	4
1	Project Communication	1			
2	Trust	.568**	.279**	1	
3	Authentic Leadership	.481**	.219**	.495**	1
4	Project Success	.287**	1		

Table: 4.2, shows the link between two variables. Project Communication and Project success share a significant positive correlation having value of $r = 0.287^{**}$ at $p < 0.01$. Moreover, Trust is positively associated with Project Communication have the value of $r = 0.568^{**}$ at $p < 0.01$. Furthermore, Project Communication has a favorable positive significant relationship with Authentic Leadership having value of $r = 0.481^{**}$ at $p < 0.01$. Moreover Project Success has a positive significant relationship with Trust where r has a value of 0.279^{**} at $p < 0.01$. Project Success has a positive relationship with Authentic Leadership where r has a value of 0.219^{**} at $p < 0.01$. Furthermore, Trust has a favorably significant relationship with Authentic Leadership and has a value of $r = 0.495^{**}$ at $p < 0.01$. This represents that all the variables are positively linked with one another.

4.3 Control Variables

Demographics such as age, gender, qualification and experience are considered as control variables. This test is performed in order to test the impact of these control variables on dependent variable i.e. project success. For this purpose one way ANOVA test was carried out on every variable. Through this test significance of each variable is known.

TABLE 4.3: Control Variables

Variables	Project Success	
	F value	Sig.
Gender	2.33	0.128
Age	0.71	0.548
Qualification	0.29	0.829
Experience	1.17	0.323

Table: 4.3, represents the control variables which depict that there is no need to change any variable as the demographic variables do not have any influence on project success. There is no different in project success due to gender ($F = 2.33, p > 0.05$), Age ($F = 0.71, p > 0.05$), qualification ($F = 0.29, p > 0.05$) and experience ($F = 1.17, p > 0.05$). In this research, none of the variable needs to be controlled since the value of $p > 0.05$.

4.4 Regression Analysis

Correlation analysis was directed to discover the connection among variables and as well as the nature of link between variables. But we cannot only rely on correlation analysis. Regression analysis is carried out to know the dependence of one variable on the other. It tells us how much one variable is dependent on the other variable.

Two types of regression are there: Simple regression and Multiple Regression. Simple Regression is conducted when there are two variables whereas multiple regression is conducted when there are more than two variables. For simple regression, linear regression analysis is carried out whereas for multiple regression Preacher and Hayes process Macros is used.

4.4.1 Simple Regression

TABLE 4.4: Simple Regression

Project Success			
Predictor	β	R^2	Sig
Communication	0.174	0.082	0

Hypothesis 1 states that Communication is positively linked with project success. The results showed in the above table also prove that communication is positively related with project success. The value of β is 0.174 and its significance has

a value of .000. This proves that the relationship between communication and project success is highly significant. R^2 Has a value of 0.082 which shows that communication brings about 8% change in project success.



TABLE 4.5: Simple Regression

Trust			
Predictor	β	R^2	Sig
Communication	0.587	0.322	0

Table: 4.5 represents that Communication is positively related with trust. The results also support this statement as the results show strong relationship between communication and trust. The value of β is 0.587 whereas the value for significance is .000. This shows that the relation among trust and communication is highly significant. R^2 Has a value of 0.322 which shows that communication brings about 32% change in trust.



TABLE 4.6: Simple Regression

Project Success			
Predictor	β	R^2	Sig
Trust	0.163	0.078	0

Table: 4.6, represents that Trust is positively related with Project Success. The results also strongly support this statement as they depict strong relationship

between trust and project success. The value of β is 0.163 and the value of its significance is .000. This shows that the relationship between trust and project success is highly positively significant. . R^2 Has a value of 0.078 which shows that trust brings about 8% change in Project success.



4.4.2 Multiple Regression

Multiple regression is performed when there are more than two variables. In this research mediation and moderation analysis was performed using Preacher and Hayes process macros. Mediation Analysis was performed in order to understand the mediating role of Trust between Project Communication and Project Success. For this purpose, Mediation Analysis was tested using Preacher and Hayes Process Macros Model 4.

For Moderation Analysis Preacher and Hayes Process Macros Model 7 was used to identify the moderating role of Authentic Leadership between Project Communication and Trust.

Mediation Analysis

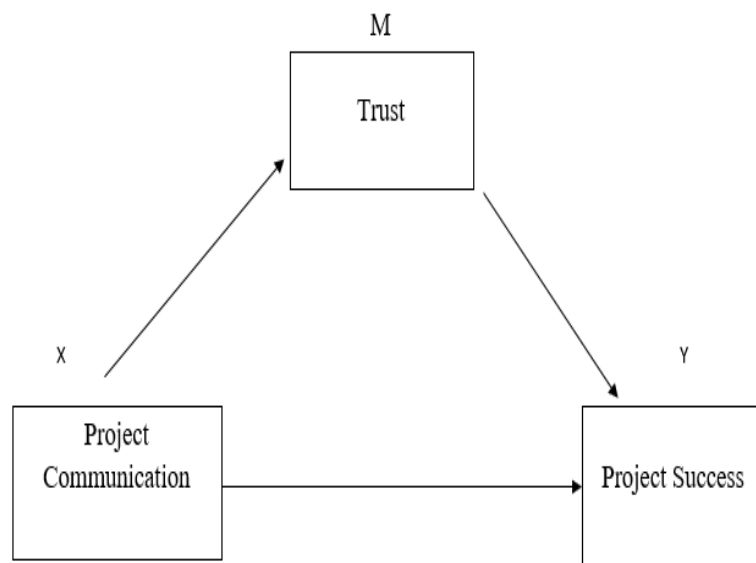


TABLE 4.7: Mediation Analysis

IV	Effect of IV on M (a path)	Effect of M on DV (b path)	Direct Effect of IV on DV (c' path)	Total Effect of IV on DV (c path)	Bootstrapping for Indirect Effect		Results
					LL95% CI	UL95% CI	
Project Com- munication	0.5698	0.1143	0.1103	2.4742	0.013	0.1218	

Hypothesis 2 states that Trust mediates the relationship between Project Communication and Project Success. The above results strongly support this hypothesis and lead towards the acceptance of this hypothesis. Model 4 of Preacher and Hayes process macros was used to validate this hypothesis. Bootstrap sample size was 5000. Level of confidence was 95 and Number of respondents were 245. Gender, Age, Qualification and Experience were used as control Variables.

Total Effect

In Total Effect the relation between IV and DV is discussed. In this research IV is Project Communication and DV is Project Success and the Mediator is Trust. Total Effect of IV on DV is 2.474 and has a significance level of .000.

The lower bootstrap value is 0.0225 and upper bootstrap value is 0.1981 which shows that there is no zero between the values. Therefore, Hypothesis 1 is accepted that project communication is positively linked with project success.

Direct Effect

Direct Effect depicts the direct effect of IV on DV along with mediator. Thus, it will show the effect of Project Communication on project success in the presence of trust being a mediator. The Direct Effect of IV on DV in presence of mediator is 0.1103 with a significance value of .000. This shows that Project Communication brings 11% variation in project success in the presence of trust as a mediator.

The lower limit bootstrap has a value of 0.0283 and upper limit bootstrap value is 0.2003. This shows that there is no zero between the limits which shows that results are significant.

Indirect Effect

Hypothesis 2 states that the relationship between project communication and project success is mediate by trust. Table 4.7 represents that the indirect effect of Trust on the relationship between project communication and project success. It has lower limit value of 0.0130 and upper limit confidence interval has a value of 0.1218. This shows that bootstrap 95% interval does not contain any zero in it. The results of un-standardized regression coefficients strongly support this hypothesis. Thus, it can be stated as Trust mediates the relationship between project communication and project success.

Moderation Analysis

For Moderation Analysis Preacher and Hayes Process macros model 7 is being used to analyze the moderating role of Authentic Leadership between Project Communication and Trust.

TABLE 4.8: Moderation Analysis

	β	Se	T	p
Project Communication \Rightarrow Trust	0.2828	0.0688	4.1108	0.0001
Leadership (Int.term)	LL95 %CI		UL95 %CI	
Bootstrap results for indirect effect	0.1473		0.4184	

Hypothesis 3 states that Authentic Leadership moderates the relationship between Project Communication and Trust such that it strengthens the relationship between project communication and trust. **Table 4.8** represents the same strengthening role of authentic leadership among project communication and trust. In this analysis, β has a value of 0.2828, t has a value of 4.1108 and p is 0.0001. Upper limit confidence interval has a value of 0.1473 and lower limit confidence interval has a value of 0.418s4 which shows that there is no zero in the 95% bootstrap confidence interval. Thus, hypothesis 3 is also accepted stating that authentic leadership moderates the relationship between project communication and Trust such that it strengthens the relationship among project communication and trust.

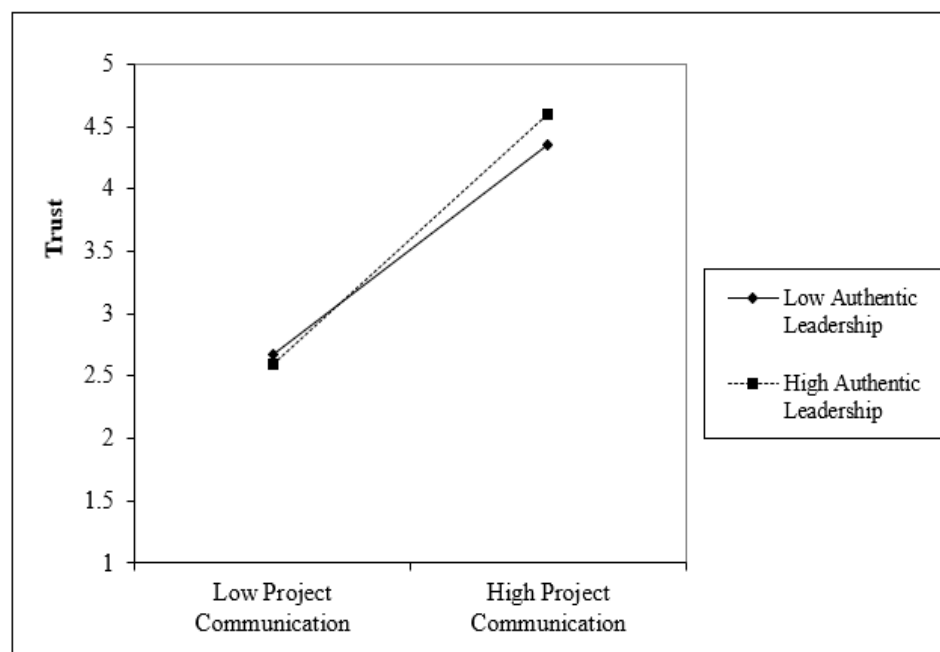


FIGURE 4.1: Moderation Graph

Figure 4.1 represents moderation graph. The bold line shows low authentic leadership and the dotted lines represent high project communication. Low authentic leadership leads to low project communication which in turn leads to decrease in trust whereas high authentic leadership leads to high project communication which in turn causes increase in trust.

4.5 Summary of Accepted/ Rejected Hypotheses

TABLE 4.9: Summary of Accepted/ Rejected Hypotheses

Hypotheses	Statements	Results
H ₁	Project Communication is positively linked with project success.	Accepted
H ₂	Trust mediates the relationship between project communication and project success.	Accepted
H ₃	Authentic leadership moderates the relationship between project communication and project trust such that it strengthens the relationship between project communication and trust.	Accepted

The results show that the entire three hypotheses are accepted with the help of research analysis. Hence we come to the conclusion that project communication is strongly linked with project success. The relationship among project communication and project success is mediate by trust whereas Authentic Leadership moderates the relationship between project communication and trust.

Chapter 5

Discussion and Conclusion

This chapter consists of detailed discussion regarding the acceptance and rejection of hypothesis along with their reasoning, theoretical implications, practical implications, limitations of the study as well as future research directions and conclusion.

5.1 Discussion

The main focus of this study was to test the relationship between Project Communication and Project success in Pakistan. In this study mediating role of trust was also studied between project communication and project success. Furthermore moderating role of authentic leadership was also studied between project communication and trust. This research was conducted in construction industries of Pakistan.

The results of the present research show that project communication has positively and significantly influence the project success. This means that through communication, success of the project increases. Positive and significant relation exists between both the variables. Furthermore, this leads to the acceptance of H1, H2 and H3. This shows that project communication has a strong relation between project success. The relationship between project communication and project success is mediate by trust whereas the relationship between project communication

and trust is moderated by authentic leadership.

Authentic Leadership is taken as moderator because it moderates the relationship between project communication and trust such that it strengthens the relation between project communication and project trust. The link between project communication and trust varies in the presence of authentic leadership as moderator. Detailed discussion and reasoning regarding all the hypothesis is given below:

5.1.1 Hypothesis 1: Communication is Positively linked with Project Success

Hypothesis 1 states that project communication is positively linked with project success. This statement was supported through data collection and analysis. The hypothesis and the results of data collection were both in line with the present study. The results show that project communication is strongly related with project success. Through strong communication skills, project success increases. The results of the hypothesis show that β has a value of 2.47 this shows that 1 unit change in project communication will bring 247% change in project success which shows that project communication have strong influence on success of the project.

Davis (2017) stated in his research that while measuring and understanding project success, Project communication is considered as a key factor. For any project to be successful communication plays a very important role. Without communication and understanding team members cannot work properly and they cannot produce desired results. For every goal achievement, a lot of hard work and team work is required which can only be possible through communication as it helps team members to communicate with each other and allows them to pour in their ideas. A project team is defined as a group of people who must communicate in well harmonized manner to achieve shared values and goals (Ryan & O'Connor, 2013). Communication and success both are interlinked. When project communication increases, success of the project also increases. This statement is also supported by past research and data. In the past research, it was also found out that for a project to be successful, communication is considered as the most important

element.

Communication ensures understanding among project team members which leads to the accomplishment of project objectives on time and in effective way. This also increases the project performance which ultimately leads to increase in project success (Henderson, Stackman & Lindekilde, 2016). Through communication, team members get to know one another and they interact with each other and complete the tasks assigned to them in less time and the task is completed more effectively. With open communication information can pass through all the levels and with the accurate and on time information will help to attain the goals and ensure timely completion of tasks which increases the performance and leads to project success.

5.1.2 Hypothesis 2: Trust Mediates the relationship between Project Communication and Project Success

Hypothesis 2 states that trust mediates the relationship between project communication and project success. It is also proved through results as the indirect effect of project communication on project success through trust has an upper and lower limit value of 0.0130 and 0.1218 respectively. This shows that there is no zero in the 95 % bootstrap confidence interval. Therefore, this hypothesis is accepted because outcomes prove that trust mediates the relationship among project communication and project success.

Literature also supports the above mentioned hypothesis and past research is also supporting this result. According to Ragatz, Handfield and Scannell (1997) it was stated that through communication and trust among individuals and groups, it will increase the likelihood of success of the project. Success of the project depends upon trust and communication between the project team members. Trust also plays an important role since when there is trust between individuals they communicate with each other more easily.

According to Henderson, Stackman and Lindekilde (2016) state in their research

that trust and communication are interconnected and they both impact the success of the project. Trust eliminates the chance of decrease in performance. Trust is essential for project communication which in turn is essential for project success. Project communication involves number of factors, communication and trust is one of them.

Project communication influenced by the level of trust in the project team and also with the leader. The high level of trust opens the way for communication and increase the flow of information which strengthen the bond between the team and leader and also helps in the completion of work within the time also work will done in most effective and efficient way.

As it is established that trust is positively related with the project communication and project success, trust will also increase the level of synergy in a project group and work done in a harmonize way to achieve the end goal whereas trust also helps to build the positive relation with in the group members and with the project leader which ultimately aid to ensure the success of a project.

After detailed research, it is concluded that project communication and project success are linked to each other and trust act as a mediating role among project communication and project success. Acceptance of hypothesis 2 focused on the presence of the fact that Trust is a vital component and acts as a link between project communication and project success such that it strengthens their bond.

5.1.3 Hypothesis 3: Authentic Leadership Moderates the relationship between Project Communication and Trust such That it Strengthens the relationship between Project Communication and Trust

Hypothesis 3 states that the relationship among project communication and trust is moderates by authentic leadership such that it strengthens the relationship between project communication and trust. Hypothesis of this study is strongly supported by the results. The results of the hypothesis represents that β has a

value of 0.2828 which indicates that if there is 1 unit change in Project communication it will bring about 28% change in trust. It has a value of 4.1108 which shows the positive and significant relationship between project communication and trust. Since the value of t is greater than 2 it means that the results are significant. p has a significance value of 0.0001.

The results of the third hypothesis were also supported through literature, past research as well as data collection. Many features are associated with authentic leadership such as confidence, strength, hope, flexibility and many more. It also affects project in many ways. Walkera & Walkerb (2011) stated in their research that an authentic leader is able to communicate with team members in accordance to the norms leading them to success. Leader has an ability to develop communication, trust and understanding between the team members. Authentic leaders help teams to develop leadership qualities and encourage them work hard and develop trust to make project successful.

Trust develops positive atmosphere and have ability to convince, motivate and draw attention of team members which increase the sense of responsibility and team complete their tasks with honesty. Trustworthy environment emerge justice which as eventually increases the level of team and individual performance and provide support to achieve the end goals and make the project successful. Relation of leader with his team members will increase through trust. Outcomes of the project are affected by the level of trust. Authentic leadership creates an environment which develops trust with in the team and opens the channel of communication.

This research is connected with past research in a way that it was previously reported that a leadership to be successful requires communication that can build or enhance trust and relationship between people and with the help of this project success can be achieved. Authentic leadership is strongly linked with project communication and success of project. An authentic leader develops trust between the team members so that they communicate effectively and increase the probability of success in a project. Walkera and Walkerb (2011) explains that authentic leader develops communication and discussion between members which create trust that

can in future help them to achieve project goals that can bring the project to achieve success.

Project communication and trust both are interconnected and authentic leadership plays a vital role between the two. All the above mentioned discussion comes to the point that the relationship between project communication and trust becomes stronger in the presence of authentic leadership as a moderator. So it can be stated that the relationship between project communication is moderated by authentic leadership and trust such that it strengthens the relationship between project communication and project trust.

5.2 Research Implications

This research includes theoretical and the practical implications of the current study with respect to construction companies.

5.3 Theoretical Implications

This research includes theoretical implications in a way that the impact of project communication on project success was not studied before in construction firms. The results of our research show that project communication increases project success. Through communication better results can be achieved. Communication is an essential key and is considered very important in determining project success. Through communication understanding between team members can be created which can help in achieving the goals and objectives of the firm ultimately leading to project success.

For the mediation among the relation of project communication and project success trust is taken as mediator. This role of trust between project communication and project success was not tested before. The results show that trust enhances or adds to the relationship between project communication and project success. Therefore, a positive and significant relationship was found between project communication and project success along with trust which is mediator, linking the

relationship of project communication and project success.

Thirdly, taking authentic leadership as a moderator is also a significant theoretical contribution in the context of Pakistan. Authentic leadership is moderating the relationship between project communication and trust such that its presence strengthens the relationship between project communication and trust. This is a very significant contribution in literature since previous literature does not highlight the impact of project communication on project success with mediating role of trust and moderating role of authentic leadership.

5.4 Practical Implications

Previous researches have not highlighted the role of authentic leadership as a moderator between project communication and trust. This research introduces this relationship in literature. This study is equally important in practical world. Results conclude that in any project communication is very important. Through communication trust develops which in turn leads to the success of the project. Authentic leadership is a new variable in this relationship as it is not used before as a moderator between project communication and trust.

This shows that authentic leadership is important in organizations of Pakistan as the authentic leader strengthens the relationship between project communication and trust. This research is beneficial to project managers, supervisors and leaders since it is very important for project managers to develop communication and trust between the employees as communication leads to the successful completion of project and achievement of goals.

Among different leadership styles, authentic leadership with accordance with the current study suggested for the construction organizations in Pakistan. As authentic leadership has positive relation with communication and trust which develop synergy in the project team members and with the leader. Information can spread easily and trust develops which enhance the performance and ultimately leads to success.

Since communication is a positive thing it should be increased. Meetings should

be conducted to address the issues of the workers and to guide them in a way that they can achieve better ways for performance and their issues and grudges should be resolved timely so that they can perform better and there is no hurdle in project success. Managers should connect the employees with one another so that the work flow doesn't get disturbed. Lack of communication can badly affect the success of the project and lead it towards failure. It is very important for the manager or work supervisor to keep all the employees bound together so that they perform effectively.

5.5 Limitations of Research

There are certain limitations in every work since nothing in this world is perfect. Similarly, this research also has some limitations that were faced while conducting this research. Due to time and resource limitations, data was only collected from construction industries of Pakistan and it could not cover other sectors of Pakistan. Due to scarcity of time only one mediator and moderator was used in this research however other moderators and mediators could also be tested with this model.

Another limitation is the sample size of the study. Due to shortage of time the sample size of this study is 245 whereas a larger sample size could also be studied. Additionally convenience sampling method was used in this study. Convenience sampling method involves taking the sample which is easily accessible to us. In data collection also there were a lot of problems since all the managers and supervisors were not willing to take out time and fill the questionnaire.

Detailed interviews could not be collected due to shortage of time. However detailed interviews could have been very beneficial but due to lack of time only questionnaires were filled by the managers and site supervisors. Supervisors and managers were not willing to provide data and were least interested in filling out the questionnaires. In such case, detailed interview could have been a better option

5.6 Future Work Directions

There is always a margin of future work in almost everything. In this study, the impact of project communication on project success was studied along with the mediation of trust and moderation of authentic leadership. This study was conducted in different sectors of private and public construction industries of Pakistan which makes the way for it to be conducted in other industries also such as telecom, IT etc.

Another direction could be the sample size as the sample size of this study was 245 due to shortage of time however a larger sample size could be taken for future research. Furthermore, the impact of project communication on project success was studied using only one mediator and moderator. In future research more than one mediator and moderators can also be used. Different mediators and moderators other than trust and authentic leadership can also be used with the model.

The current study is focusing on cross sectional data collection method however in future research longitudinal data collection can also be useful. Detailed interviews can also help in understandings the problems faced in making the team communicate with one another and the strategies adopted by the managers for doing so. Furthermore, Future researchers can also add cultural context in this research. Lastly, the outcomes and significance of this research will help the future researchers who are interested in working on this model with the help of different mediators or moderators.

5.7 Conclusion

This research focuses on the impact of project communication on project success with the mediating role of trust and moderating role of authentic leadership. This study is carry out in Pakistan and covers construction companies of public and private sector in Islamabad and Rawalpindi. Data was gathered from private and private construction companies of Islamabad and Rawalpindi through a questionnaire survey to know the level of impact of project communication on project

success with the mediating role of Trust and moderating role of Authentic Leadership.

Total 350 questionnaires were distributed from which only 245 responses came back. These 245 responses were then used for analysis of data of this research study. The results show that the model is significant. There are three hypotheses which are discussed above. All three hypotheses were also accepted as the results of data analysis strongly support these hypotheses. The results show strong connection between all the four variables: Project Communication, Trust, Authentic Leadership and Project Success.

This research contributes significantly to the existing literature of project communication and project success. Since very limited literature was available on these gaps. Very limited literature was available regarding the link between authentic leadership with project communication and trust. Furthermore, this study contributes to the literature in a way that it contains a different moderator between the relationship of project communication and trust. It also consists of a different mediator among project communication and project success.

The outcome of this research will help the construction industries in Pakistan to realize and to understand the basic reason that plays an important role in the success of the project. The study focuses on the relationship between project communication and project success along with mediating role of trust and moderating role of authentic leadership.

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Appendix-A

Questionnaire

Dear Participant

I am students of MS Project Management at Capital University of Science and Technology, Islamabad. I am conducting a research on **”Impact of Project Communication on Project Success with Mediating Role of Trust and Moderating Role of Authentic Leadership”**. Kindly fill in the below questionnaire it will take 5 - 10 minutes. Your responses will kept confidential and will only be used for academic purposes. Your name will not be mentioned, so kindly give unbiased opinion to make research successful.

Regards,

MS (PM) Student,

Faculty of Management and Social Sciences,

Capital University Science and Technology, Islamabad.

Section 1: Demographics

Gender	1- Male 2- Female
Age(years)	1 (18-25), 2 (26-33) 3 (34-41), 4 (42-49), 5 (50 and above)
Qualification	1(Matric), 2(Intermediate), 3(Bachelor), 4(Master), 5(MS/PhD.)
Experience(years)	1 (1–5), 2 (6–10), 3 (11-15), 4 (16-20), 5 (above 20 years)

Section 2: Project Communication

Please tick the relevant choices: 1= strongly disagree, 2= Disagree, 3 = Neutral, 4= Agree, 5= Strongly Agree.

While working in a project:

Everyone participates.	1	2	3	4	5
Everyone has a chance to express their opinion.	1	2	3	4	5
We listen to each individual's input.	1	2	3	4	5
Members feel free to make positive and negative comments.	1	2	3	4	5
Even though we do not have total agreement, we do reach a kind of consensus that we all accept.	1	2	3	4	5

Section 3: Trust

While working in a project

I feel quite confident that my leader will always try to treat me fairly.	1	2	3	4	5
My leader would never try to gain an advantage by deceiving workers	1	2	3	4	5
I have complete faith in the integrity of my leader	1	2	3	4	5
I feel a strong loyalty to my leader	1	2	3	4	5
I would support my leader in almost any emergency	1	2	3	4	5
I have a strong sense of loyalty toward my leader	1	2	3	4	5

Section 4: Authentic Leadership

While working in a project

I am aware of why I do the things I do.	1	2	3	4	5
I am aware what demotivates me.	1	2	3	4	5
I am aware of what drives or motivates me.	1	2	3	4	5
I am aware of what I truly find important.	1	2	3	4	5
I'd rather not be confronted with my personal limitations and shortcomings.	1	2	3	4	5
When someone criticizes me, I try not to vest too much attention to it.	1	2	3	4	5
I'd rather not have my personal weaknesses exposed	1	2	3	4	5
I try to block out unpleasant feelings about myself.	1	2	3	4	5
I often pretend to like something when I really do not.	1	2	3	4	5
Even when I disagree with someone, I will often silently agree.	1	2	3	4	5
I often behave in a way that does not reflect my true feelings or thoughts.	1	2	3	4	5
I often pretend to be someone I am not.	1	2	3	4	5
I stay true to my personal values.	1	2	3	4	5
I act in accordance with what I believe in.	1	2	3	4	5
People can count on me to behave in the same way over situations.	1	2	3	4	5
I act according to personal values, even if others criticize me for it.	1	2	3	4	5

Section 5: Project Success

While working in a project

The project was completed on time.	1	2	3	4	5
The project was completed according to the budget allocated.	1	2	3	4	5

The outcomes of the project are used by its intended end users.	1	2	3	4	5
The outcomes of the project are likely to be sustained.	1	2	3	4	5
The outcomes of the project have directly benefited the intended end users,either through increasing efficiency or effectiveness.	1	2	3	4	5
Given the problem for which it was developed, the project seems to do the best job of solving that problem.	1	2	3	4	5
I was satisfied with the process by which the project was implemented.	1	2	3	4	5
Project team members were satisfied with the process by which the project was implemented	1	2	3	4	5
The project had no or minimal start-up problems because it was readily accepted by its end users.	1	2	3	4	5
The project has directly led to improved performance for the end users/target beneficiaries	1	2	3	4	5
The project has made a visible positive impact on the target beneficiaries	1	2	3	4	5
Project specifications were met by the time of handover to the target beneficiaries	1	2	3	4	5
The target beneficiaries were satisfied with the outcomes of the project	1	2	3	4	5
Our principal donors were satisfied with the outcomes of the project implementation.	1	2	3	4	5