IMPACT OF KNOWLEDGE SHARING ON PROJECT SUCCESS WITH MEDIATION OF INNOVATION AND MODERATION OF CREATIVE SELF-EFFICACY

By

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بسم الله الرحمن الرحيم

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Ayesha Tehreem

A research thesis submitted to the Department of Management Sciences,
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CERTIFICATE OF APPROVAL

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This is to certify that MissAyesha Tehreem has incorporated all observations, suggestions and comments made by the external evaluators as well as the internal examiners and thesis supervisor. The title of his Thesis is: “Impact of Knowledge Sharing on Project Success with mediation of Innovation and moderation of Creative Self-Efficacy”.

Forwarded for necessary action

Dr. Sajid Bashir
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Dedication

This work is dedicated to my parents and my teachers.

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Abstract

The focus of this study wasto examine the impact of Knowledge Sharingon Project Success with the mediating role of Innovation and the moderating role of Creative Self-Efficacy. The context was project based organizations in Pakistan.Questionnaires were used to collect data from 296 employeesworking on variousprojects. Results indicate Knowledge Sharing is positively linked with Project Success while Innovation partially mediates the relationship between Knowledge Sharing and Project Success. In addition, the results confirmed themoderating role of Creative Self-Efficacy between Knowledge Sharing and Innovation.

Keyword: Knowledge Sharing, Innovation, Creative self-efficacy, Project success

CHAPTER 1

INTRODUCTION

1.1Background

In most organizations ‘Knowledge’ is defined as one of the strongest andsignificant competitive assets (Alexy, George, & Salter, 2013). Knowledge management is an important factor for organizational success, products and services(Antoni, Witell, &Dahlgaard, 2005). Social capital created in virtual groups assumes an essential part in information sharing, individuals have concentrated collaborations and trust each other, they tend to share dependable information (Chang &Chuang 2010).

In venture based associations when Knowledge is shared, it’s vital to make great relationship between partners of various projects(Saether, Karlsen, &Oorschot,2015).Knowledge sharing is very important for organizational learning and enhances tremendous gains to an association (Down, 2001; Van Woerkom& Sanders, 2010). Large multinational organizations with high topographical distribution are heavily dependent on fruitful knowledge sharing among staff, teams, and departments (Ellison, Gibbs, &Weber 2014).Project performance is strongly associated with the knowledge sharing (Niedergassel & Leker 2011)

Literature suggests that not only the top authorities of an organization can’ttake care of each and every individual project, they alsoneed to realize the significance of project leaders to achieve the project success;Furthermore, necessary authority over the project resources should be delegated to the project leaders; where a proper documentation is always useful for top management to review their strategies and policies for attainment of project success. (Iqbal, Long, Fei, &Bhukari 2015).

Knowledge sharing in an organization is dependent on the type of knowledge whichneeds to be shared, i.e. tacit or explicit. Knowledge sharing researchers have

different views on tacit or explicit knowledge sharing intentions because people may possibly adjust their knowledge sharing intentions according to the various resource requirements of tacit and explicit knowledge sharing activities. (Haua Kim, Leec& Kim, 2012).

Sharing knowledge ensuesdifferentbenefits, such as a good performanceevaluation and reward from the organization, for sharing knowledge with team members,along with providing support to the company, organizing and developingessential networks within an organization, which are also a part of structural opportunities for knowledge sharing (Chen, Chang, Tseng, Chen & Chang 2012).

Knowledge management is the process ofapprehending, distributing, saving and utilizing knowledge, while ithasbecome a most important factor toincreaseand maintain a firm's competitive advantage(Eze,Goh, Goh& Tan 2013).As reported in literature related to project success a measuring tool called iron triangle (i.e. cost, time and quality) is used to assess project success but it concentrates only on the finalstage of a project ignoring other stages(Nubuor, Hongyi &Frimpong, 2014).For the creation of novel thoughts and for novelty of different projects, knowledge sharing initiatives appear to be the most significant. (Saenz, Aramburu & Blanco 2012).

The role of innovation capability on innovation performance provides valuable knowledge for better understanding of innovation(Yesil,Koska& Buyukbese2013). Knowledge sharing has direct influence on innovativebehavior, whereas organizational innovation climate has positive impact on worker's innovativebehavior. (Yu, Fang&Cheh 2013).The accomplishment of construction projects isstrictlyconnected to contractors who start their prime work when a project reaches at execution stage. Before moving to a new project, identifying pros and cons

in a post construction evaluation, has proven to be an important factor in construction projects (Alzahrani &Emsley, 2012).

Some organizations take advantages from customer's feedback while others utilize novel knowledge in order to produce new ideas and amazinginsights, which arealwaysimportant for the progress of innovationin order to build up uniqueproduct features and motivation for future projects (Mahr, Lievens, &Blazevic 2013).

A study by Axtell, Holman,Unsworth,Wall and Waterson (2000) posited that employeeswith supportive team leader, higher team method, diversity of team responsibilities (team role breadth), encouragement for innovation, and an active participation and cooperation from management, tend to believe that much of their suggestions were put into practice.

In present era, employees' innovative behavior is considered as an important asset that largely contributes towards competitive advantage of an organization, considering that innovation is the successful implementation of novel and usefulcreative ideas presented by employees (Kor &Mahoney, 2000;Walberga& Starihaa, 1992). Knowledge sharing activities have contributed tothe organizational abilities likeinnovation that is significantfor good performance of a firm. (Kogut& Zander, 1996)

Innovation is strongly linked with newness, creativity and to theories like consistency, low patience and systematic process. The innovation value regarding products or services can be defined by using certain variables including quantity, competence, consistency, time, expenses and difficulty, etc. (Wang & Wang, 2012).

In order to inculcate innovation, the resource base of the organization needs to be redesigned including the information regarding new goods, services, processes, technologies and business models and to enhance the innovation ability of an

organizationinformationsharing is imperative; however, the degree of relevance of knowledge sharing mechanism varies. (Saenz, Aramburu& Blanco 2012).

It has been empirically proven that innovation enhances firm's performance because it assures prompt reactions by adding product with lesser time and costs. (Tidd, Bessant, &Pavitt, 2005).

Literature suggests that self-efficacy plays a vital role in enhancing the innovation among employees, by the virtue of their strong confidence in self-efficacy for creativity (Gong et al.,2009; Tierney & Farmer, 2002, 2011). Usually, people with high self-efficacy confidently accept difficulties as challenges and set high goals with more efforts to attainchallenged goals themselves (Tsung &Fan,2011).

Creative role identity and creative self-efficacy both are related to employee performance of creativity (Wang, Tsai & Tsai 2013).Managers should provide their employees with ample opportunities for creative endeavors, if they are to develop firm's identity as creative employees because employees with high creativity, reportedly have a stronger sense of creative role identity.(Farmer, Tienery & Mcintyre, 2003).

Social environmental factors within a work situation affect employees' motivation to innovate and also their creative self-efficacy (Tsung &Fan, 2011). Groups and teams exhibit better creativity, if the members score high extraversion and openness to experience, or scoring low onconscientiousnesswhen they share a sense of creative confidence (Baer, Oldham &Jacobsohn. 2008).

Richter, Hirst, Knippenberg and Baer(2012) proposed thatbuilding Creative Self-Efficacy may be an excitingapproach for managerial actions focused at increasing individual creativity or raising creative self-efficacy; whereas, these managerial actions may, therefore, also develop the team framework where a particular creativity

plays out. Employees having greater creative self-efficacy and positive beliefsfor creative behavior during job are believed to be creative at work as compared to the employees with low creative self-efficacy (Carmeli &Schaubroeck, 2007).

1.2 Gap Analysis

The research on project success is in its growing stage.Holzmann (2013) stated that literature on the knowledge management and knowledge transfer in project management will have great attention for the upcoming researches in following years.Changing Personnel approach toward sharing of information is vital for disseminating information with team members of the project(Zhang& Ng, 2012). Wang and Ko, (2013),describesthat there are limited studies that discoverthe contingency factors affecting their application in the context of managing projectsand the knowledge sharing mechanisms used withunforeseen disturbances.A very little research regarding project success is available in the recent literature.In order to fill this gap,the current study highlights the role of knowledge sharing for project success and found three important gaps in the literature. The focus of the study is on relationship between knowledge sharing and project success, through the mechanism of innovation., along with exploring how creative self-efficacy may moderate the said relationship of knowledge sharing and innovation.The lack of any substantial empirical studies using creative self-efficacy as moderator between the above mentioned relationship calls for filling this gap.

1.3Problem statement

The current study argues that knowledge sharing practices don’t only have positive relationship with project success directly, but also influence innovation, which is in turn related to project success.

Therefore, the current study aims to find out whether and how is knowledge sharingbeneficial for project success. Therefore, the problem statement of the study:

How does knowledge sharing affect the project success, through innovation?

By testing therelationships among variables will help to identify the impact of knowledge sharing on project success and help enhance to the existing literature of knowledge sharing and project success.However, it is a premeditated fact that mostof the research in different context. There are limited studies on related topic, with no significant study which has been conducted yet, with these variables in Pakistani context.

1.4 Research Questions

The present study intends to find outanswers of the following questions by keeping in view the above mentioned problem statement:

- **Q 1:** How 'Knowledge Sharing' is related with 'Project Success'?
- **Q 2:** Does innovation mediate the relationship between 'Knowledge Sharing' and 'Project Success'?
- **Q 3:** How does creativeself-efficacymoderate the relationship between 'Knowledge Sharing' and 'Innovation'?

1.5 Significance of the Study

In numerous situations, projects can come to halt because of not profiting the customer and organization or providing ample revenue even if they are executed as scheduled, within cost and accomplish the planned performance goals (Dvir, Raz & Shenhar 2003).This research intends to empirically test a new model to determine direct relationship of knowledge sharing and its impact on project success. Therefore, it brings a novel thought in Pakistani context. It is very important for the

organizations to effectively manage knowledge but it can only be achieved when employees are willing to share their knowledge. Knowledge sharing contributes a lot to innovations in individual teams as well as in the whole organization. (Wang, Wang, 2012).Sharing of knowledge hasbecome a basicrequirement for the success of project (Park, Lee 2013).

This study also contributes in the existing literature of knowledge sharing and project success. The people with high self-efficacy are believed to be more creative than the people who have low self-efficacy and self-efficacy is the confidence of an individual in his/her ability to develop novel ideas and bring innovation in the organization (Yang &Cheng, 2008). In addition, this study aims at enhancing the knowledge sharing and project success literatureby examining the following relationships.

1) Main effectof knowledge sharing on project success.
2) Mediating roleof 'Innovation' among the relationship of: (a) Knowledge Sharing and (b)Project Success
3) Moderating role of creativeelf-efficacy in the relationship of: (a) Knowledge Sharing and (b) Innovation.

The other relationships which are the focus of examination in this research, though have been examined before in other contexts, have either inconsistent existing results, or are significant for assurance of their generalizability in Western organizational context. In addition, this study contributes towards our understanding concerning the impact of knowledge sharing on project success with mediating role of 'Innovation' and moderating role of 'creative self-efficacy'in one model that has never been studied before, in Pakistani context.

In addition, this research has significant managerial implications. This model helps management to better comprehend how knowledge sharing helps to bring innovation

in the organizations, and how with the help of innovation, projects success can be enhanced and ultimately, how creative self-efficacymoderates these relationships in Pakistani organizational context.

1.6Theories supporting research on the topic

1.6.1Communication visibility theory

Several theoretical perspectives have been presented by different researchers, which are used worldwide to support the studies of knowledge sharing and project success. Current model finds theoretical support in communication visibility theory can cover all the variables of the present study. Leonardi, (2014) states that when communication between managers and other team members is visible and knowledge sharing with the team is a norm, then employees tend to come up with more innovative ideas, which leads to project success and communication visibility enhance knowledge and promotes innovation through knowledge sharing.

In recent decades there has been an increase in the use of technology to make communication visible as a work activity, Communication by telephone or face-to-face encounters is largely invisible communication in most organizations (Leonardi, 2014). This theory explains that communication visibility in organizations increase knowledge sharing and team member make more innovative ideas which lead to project success. This study aim is tofind out the importance of knowledge sharing with employees to increase innovation and make project success.

1.7Definitions of Study Variables

1.7.1 Knowledge Sharing

“Theexchange of knowledge between individuals, teams, organizational unitsand organizations is Knowledge Sharing. This exchange may be focused or unfocused, but it usually does not have a clear a priori objective.”(Paulin&Suneson 2012)

1.7.2 Innovation

“The process of translating an idea or invention into a good or service that creates value or for which customers will pay”(business dictionary)

1.7.3 Project success

The definition of a project has suggested that there is an orientation towards higher and long-term goals. Important parameters within the goals will be return on investment,profitability, competition and market ability (Munns&Bjeirmi, 1996)

1.7.4 Creative Self Efficacy

Creative self-efficacy: “An intervention study one relevant concept in this regard that has received attention is creative self-efficacy, defined as "the belief one has the ability to produce creative outcomes" (Tierney & Farmer, 2002).

CHAPTER 2

LITRATURE REVIEW

2.1Knowledge sharing and project success

Earlier researches on project managementgenerallydiscussed achievements of individual project goals by using consolidated project techniques and tools (Turner, 2010). The current study is aiming at the organizational learningas thevital driving force in making a project successfulin project based organizations (Reich, 2007)..

An organization must be able to implement projects successful(Reich, 2007).Knowledge sharing amongstprojects reduces the costs of repeating struggles for the similar problem-solving of an organization (Boh, 2007). In ProjectBased Organizations enterprise information management strategies encourages the explicit projectrequirements andalsocontribute for enhanced performance of a project, it also facilitates knowledge creation and dissemination between project instances (Fong, 2003).

The knowledge created on conclusion of a projectshould be transmitted amongst organization to boost organizational learning and it will heavilycontribute in collective knowledge-basis across projects. The definition of knowledge sharingmechanisms in ProjectBased Organizations has been adopted as “an informal mechanism for sharing, integrating, interpreting and applying know-what, know-how, and know-why embedded in individuals will support in the performance of project tasks”(Boh, 2007).

Knowledge and information is required to be properly labeledand placed in databanks and documents, as such it can be accessed by every employee.Knowledge

sharingprocessis implemented by “people-to-document” strategy. Knowledge is delivered by the people who “know”. It should be made availablein a “document” so that it can bereused by other people who access the “document” to utilize it for other requirements. Through this many people desirous to search knowledge can get it easily (Hansen et al., 1999).

For obtaining new knowledge,methods, and inventions, Project managersshould persuade members of different departments to work together. This knowledge should be utilizing to solve troubles and work more efficiently and effectively to makeproject successand project manager use this knowledge in practice (Yang, Chen & Wang, 2011). For actualexecution or realization of specific project sharedinformation of clients, viable offerings, internal and contractor design and manufacturing abilitiesamong the cross functional team members working on the project are necessary (Hong, Doll, Revilla&Nahm 2011).

People share information through direct communication and connect with the help oftechnologyand other networks and these process have considerable optimisticeffect onthe scopeof information sharing, Project team members stayswith each otherunless the project or job is accomplished and the social structurewhich is use for knowledgesharing becomestop(Wickramasingh&Widyaratne, 2012). Communication quality plays significant roles in project teams because it is positive related to the knowledge sharing and technical performance of the team(Chena, Li, Clark & Dietrich, 2013).

Projectsuccess in terms of schedule, cost, quality, and stakeholder requirements can beachieved with sharing knowledge withteam members and alsocollaborate with them (Suppiah&Sandhu, 2010). Sharing of knowledge hasbecome a basicrequirement for

the success of project.There are some sources of knowledge in every project liketeam members or project achievements. (Park, Lee 2013)

A document carrying technological proposal, change plan and project benefits is always useful for having a high level of proficiency, suitableenvironment, and sharing knowledge between the project manager and project teams.(Reich, Gemino, Sauer 2011)Project knowledge is usenot only as a result of a specific requirement, but also during the activities performed in the organization that have objective to develop not information directed toward the completionof specific projects, but also getinformation in thatareas defined by the firm's project knowledge management plan (Gasik, 2011).

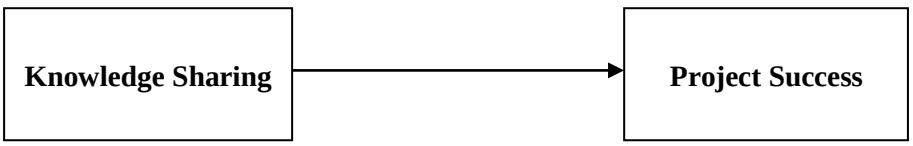
Performanceof a project is strongly associated with the shared information. A high inter-dependency isimportant when tacit information is involved in a collaboration project (Niedergassel,Leker, 2011). People will share information, on prior workingpractice, mostlycontractors will build up strong relationshipswith other sub-contractors and association between acontractor and the sub-contractorsincludes training,information sharing and experience (Alashwal, Rahman&Beksin, 2011).

Changing Personnel approach toward sharing of information is vital for disseminating informationwith team members of the project.The whole team would be rewarded if it produces positive resultsthrough sharing of knowledge and cooperation of team members. An indirect outcome of knowledge sharing economic rewards may be enhanced. (Zhang& Ng, 2012)

When there is stronger relationship with social network, moreinformation sharedwhich leads to organizational learning, Social network becomesa source for knowledge sharing, which leads to organizationalperformance (project success) (Swift

& Hwang 2013). People with high communism would like to share more information with other team member than people with low communism; cultural dimensions have both positiveand negative effects on knowledge sharing. (Zhang, Pablos & Xu, 2013). Industrial countryincreased the significance of managinginformation, managing knowledge andsupporting the improvement of that information(knowledge) (Burke, 2010).

Explicit knowledge is usually shared and communicated by employees freely, scientific explanation of goods, resources and tools.In opposite, tacit knowledge ishardly sharedamong staff, e.g. perceptions, idea, practice (Fong, Ooi, Tan, Lee & Chong, 2011). Employees who are morepleased with their work will be busier in information sharing, people who are more loyal to their organization, share more knowledge (Teh, Sun, 2011). Related information can be obtained brightly and very rapidly by creating relationshipsbetween work and information (Liu, Raahemi, Benyoucef, 2010).



H1: Knowledge sharing is positively associated with project success

2.2 Mediating role of innovation between knowledge sharing and project success

The knowledge sharing and innovation have been an important topic in many studies in the literature. These are two significant andinterconnected topicswhich require more consideration to know their dynamics and effects. Innovation capability of the firmsstrongly affectsits knowledge sharing and innovation performance(Yesil,Koska,& Buyukbese, 2013). Knowledge sharing also provides potential for new and innovative combinations of knowledge(Kanter, 1988).

When a firm has different field of its knowledge repository it needs to generatea newperspective on its existing knowledge. Knowledge sharing is always helpful for a firm to integrate its broad knowledge across various fields in unusual patterns to create ideas for innovation (Zahra and George, 2002). Internal knowledge sharing enhances individual competency and helps create an advanced understanding of its present knowledge. (Kale and Singh, 2007; Tsai, 2001)

Firm develops knowledge and essential proficienciesin the form of methodical or skilled capability which tends to involve in activities in its existing specialized fields. (Christensen, 2006) Aulawi et al. (2009) argued that knowledge can be spread, implemented and developed through development of knowledge sharing. They further argued that knowledge sharingcan stimulate individual to think more creatively, so they finally can generate new knowledge. The linkbetween learning orientation and firm innovativeness, between learning orientation and firm performance nurtures sturdier with the help of using the information more professionally(Calantone, Cavusgil, Zhao,2002).

Sharing knowledge with workers is important procedure for the inventive act of the organizations, Information sharing is an important factor for improving organization innovative capability (Ordaz ,Cruz ,Ginel& Cabrera 2011). Implementing knowledge sharinghas very important implications for the organizationalinnovation ability and innovation performance. Organizations need to pay attention on the factor of the innovation ability if organizations wantto increase their innovation capability. As an innovation ability factor, knowledge sharing have positive impact on the innovation capability (yesil, Buyukbese, Koska, 2013).

Organizations get benefit from external knowledge sharing and make better innovation performance of organization, some employees intentionally disclose knowledge could be reducing (stop) these efforts (Ritala, Olander, Michailov&Husted 2015).Information sharing is valuable resource for company innovation process. Therefore, those organizations want to increase their novel capabilities need to increase information sharing (Yesil &Dereli, 2013).

When Knowledge sharing is used to explain the market opportunities, Innovationand product success is attainable (Wong, 2013). Innovation process can be represented as aresult of the knowledge processes. Innovativeness of an organization will be supported by Knowledge management processes and practices, Organizations need to take care not only of knowledge acquisition but of knowledge creation as well for sustaining the innovativeness (Andreeva&Kianto, 2011).

Knowledge sharing helps in avoiding the mistakes and not only contribute to the success of the organization, but also reduces the cost of the goods or service and develops thecapability to innovate, theme of innovation management has changed by the knowledge economy (Iqbal, Rasli, Heng, Ali, Hassan &Jolaee, 2011).

Organizations requires specific mechanism and techniquesfor enhancing knowledge investigation and utilization, for successful execution of information managing oriented to innovation,Organizational factors and knowledge management practices are equallystrengthening and make better innovation performance (Donate &Guadamillas 2011).

Organizations should make more work to improve their abilities of both information absorption and knowledge application and then enhance their innovation process, Organizations are able to rapidity new manufactured goods development and produce

more innovative production processing technologies and managerial systems by efficiently utilizing knowledge (Madhoushi, Sadati, Delavari, Mehdivand&Mihandost 2011).

Knowledge is known as the most important sourcefor viable benefit and thekey to enhancing innovation. To achieve the goals of an organization efficiently innovation can be known as increasing, producing, adopting, and executing new thoughts, process, initiative, and strategy (Husseini& Elbeltagi, 2015). Significant contributing characteristics which can be helpful for the accomplishment of projects, includes; Organizational innovation, nationwide andinternational cooperation, organizationmagnitude, and possessing firm membership(Benita, Segura, Marcos & Sanchez, 2015).

The innovation procedure requires explainingnew and existing knowledge in order to respond to environmental changes, execution of new technologies and processes, organizations will more rapidlyadapt to environmental changes whenfirms showpositive attitude toward innovation (Fraj, Matute&Melero, 2014). Activities during progress, advertising and technical activities are considered to be significant, Incremental innovationswere faster to market. Products that were previously introduced on the marketwere mostly based on accessible information (Rese &Baier, 2011).

New informationwould be gained from many projectsand used that informationtowards more successful project in the future, knowledge will help organizations to improve their strategies and rank theirprocedure and policies (Altuwaijri&Khorsheed, 2011). Success of customer innovation projects is depending

on thesuitability or compatibility of the firms andstrongly influenced by the interaction of the two organizations involved in the project (Wagner,2009).

Innovation may require some extra expenses to organizations and decrease their earnings, environmental innovation produce similar innovation success compared to other types of manufactured goods and procedure innovation (Rennings, Rammer, 2010).

Innovation is knowing as a essential competitivebenefit for both technologyand organizational,high cost goods, services, systems, networks, capital assets, and infrastructures are formed in low volumes and modified to fulfill customer's specific requirements, they require project policies, project capabilities, tools and techniques for project management, and project based organization (Davies, Brady, Prencipe&Hobday, 2011).

Project management offices (PMOs) or other project based organizations can beconsidered to have an important role in the administration of novelty projects (Arttoa, Kulvika, Poskelab&Turkulainena, 2011).

H2: Innovation mediates the knowledge sharing and project success

2.3 Creative self-efficacy as moderator between knowledge sharing and innovation

Sharing information to members of the organizationand outside the organization is helpful to improve capability of employees to solve problems innovatively (Carmeli,Gelbard, &Palmon, 2013). Human resource management processes assists

ways for managers to create a moreobvious and established environment and assist employees to channel their energy to productive areasinstead of experiencing friction from uncertain and unbalanced organizational mechanisms. In this way employee can easily understand the environment and their strong associationwith organization (Binyamin &Carmeli, 2010).

As employees get complete information about their duties associated with their jobs, this will automatically raise their confidence level and that they can be more creative in their work tasks, high creative efficiency should generate strong creative aspiration levels, wewould expect there to be some nourishing of creative attempts with resulting creativeperformance, in light of the positive, target specific creative efficacy judgment (Tierney, Farmer,2002).

Firm's competitive edge is mainly dependent on the creative employees who can provide novel and useful ideas that are veryimportant for the development of advancedtechnological products(Carmeli, Palmon, &Ziv 2013). When members exchange information and ideas, teamup with each other, and involve in joint decision making processes, group functioning and performance is amplified. Leaders play an important role indetermining and nurturing work perspective that enables people to transmit knowledge from onetask or situation to another (Carmeli& Waldman 2009).

Knowledge sharing is considerably linked with the degree of attainment of outsourcing benefits, the ability of the service receiver to absorb the desirable knowledgehas a significant direct effect on the benefit achievement. (Lee, 2000). People with extraordinarycreative self-efficacy' successfully manage failures and uncertainties when they highly self-assured and implement innovative tasks (Seligman &Csikszentmihalyi, 2000).

When environment of workplace is compatible with the people they getsatisfied, innovative persons to be extra instinctive, associative, and spontaneous than other people.In an organization Individuals with creativity are likely to influence management inappointing competent and creative individuals and arranging of training sessions to improve their creativity (Sagiv,Arieli,Goldenberg&Goldschmidt, 2010).

Supervisors who expected creativity from their employees, they awarded rewardsin recognition of their creative efforts, arranged extra resources, appreciated sharing ofinformation and material, provided congenial teamwork environment and displayed creativity in their own work (Tierney& Farmer 2004). Knowledge distribution comprises asking top and low level employees to accept basic concepts and activities associated to knowledge sharing.A change managementstrategy is required to keep employees abreast about organizational goals. Informative orientation identifies knowledge sharing as a learning opportunity because without self-understandingthey cannot make it understandable for their coworkers (Wang & Noe, 2010).

Knowledge sharingcan make team decisions more workable, and matching, high efficiency of managementteams can be a significant asset foran organization(Srivastava,Bartol&Locke, 2006). People possessing high level of self-efficacy are considered to be extra assured and perceive problems as tests; these individuals may also set extraordinary objectives andmake extra efforts to overcome needed tasks themselves (Hsu, Hou,Fan 2011).

A team that consists of individuals having higher level of creative confidence and whose team members aresusceptibleto experience is expected to generate morecreative ideas (Baer,Oldhan, Jacobsohn& Hollingshead,2008). The individuals

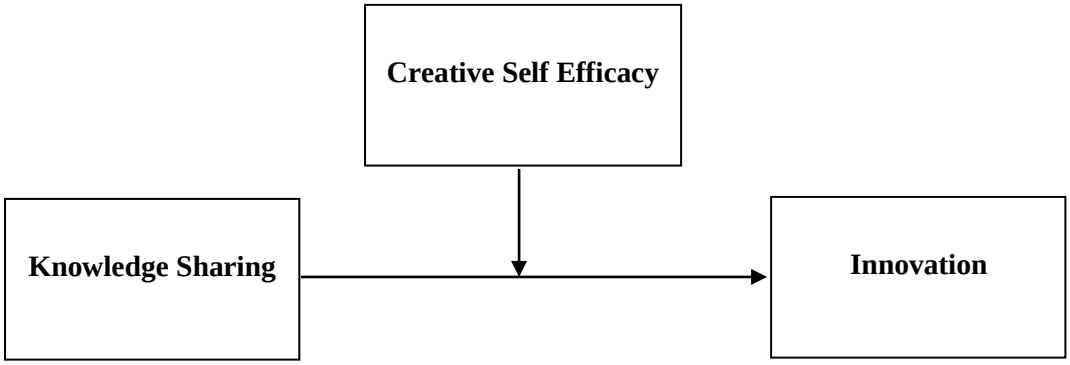
having high creative self-efficacy are also expected to be more motivated on proving their skills by performing better than other (Beghetto, 2006).

For organization's success creativity and innovation is elementary element, knowledgebase on creativity and innovation in the workplace(Anderson, Potocnik&Zhou, 2014).The lowest creativityoccurred among employees who believed they had innovative ability butlacked confidence in their work place ability, creative self-efficacy clearly aims the capability to becreative, this may bean additional influence other thanthat of created by the confidence in the competency to dothriving workin overallscenario (Tierney, Farmer 2002).

Both personal and contextual factors should be considered to increase creativity inorganizations; Employees showed good performance and turnover rate declined when theirjobs were difficult and when their upper management were described as supportive andcoordinated. (Oldham &Cumming, 1996).Workers creativity was directly proportional tosales and to employee job performance as evaluated by the supervisor, creative self-efficacy is part ofknowledge and skills as well as basic motivation to be creative(Gong,Huang, &Farh, 2009).

Teams provide well managed and coordinated context where people are given chanceto bring new and innovative idea for practicing things, environment for innovation is vitalfor converting team creativity to innovation implementation. Team members must take riskopenly offering novel ideas and newworking style and suggest new problem solving solutions.Ifteam members areprovided opportunities to consult and share information with people having extra creative abilities and with those who performing different organizational roles havingvital informationand various

viewpoints, they willdemonstrate a durable relationship to team creativity (Somech &Zahavy, 2011).



H3: Creative self-efficacy moderates between knowledge sharing and innovation.

2.4Research Model

Current study aims at examining the direct impact of knowledge sharing and project success, along with considering the moderating influence of creative self-efficacy and mediating role of innovation.

In this research model (Figure 2.1), knowledge sharing is an independent variable, project successis a dependent variable, innovationis a mediatory and creative self-efficacy is a moderator.

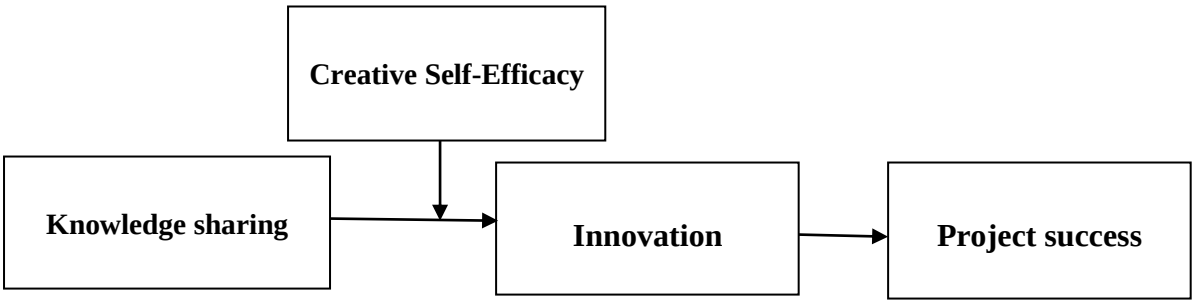


Figure 1: Research Model

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Introduction

This chapter contains the explanation of study design, population, sample, the scales that were used to measure the study constructs, and the statistical procedures which were appliedto get the results.

3.2 Pilot Study

A pilot study was conducted so that it could be assured that questionnairewas valid. The pilot study was conducted on the sample size of 50. After collecting all 50 questionnaires,variables' reliability wasevaluated which indicatedadequate alpha coefficient values. The alpha coefficient value of creative self-efficacy was 0.50 which was low. Hence, Item 7 from questionnaire was removed and the reliability was enhanced.

Table 1 : Reliability Analysis for pilot testing

Variables	Items	Cronbach's Alpha
Knowledge Sharing	6	0.79
Innovation	10	0.86
Project Success	14	0.83
Creativeself-efficacy	12	0.84

3.3 Population and Sampling

3.3.1 Population

The population of the study includes public and private sector organizations of the capital city Islamabad.

3.3.2 Sample and Procedures

Knowledge sharing may vary across public and private sector organizations, and also across manufacturing developing and services organizations. Therefore, to capture maximum variance, project based organizations located in the capital city Islamabad, were targeted for data collection. Due to time limitations, convenience sampling method was used to collect the data. The researcher approached the respondents through personal and professional contacts.

In order to avoid common method variance, the respondent's supervisors were approached to collect data on employees' knowledge sharing, creative self-efficacy and innovation. Whereas data on project success were self-reports. Data collection was self-administered.

Responseswere voluntary and were kept confidential. An introductory letter reflecting the aim of study and assurance that the identity of the participants would be strictly private and data collected would be utilized only for the purposes of present research was served along with the questionnaire.

Completed surveys were collected by the researcher herself. The data were collected from subordinates and their immediate supervisors, between October 2016 and December 2016.

3.4 Data Collection

Questionnaires were used for data collection. The time period spends in data collection was two months. This research design of this study was cross sectional. The questionnaires were adopted from previous literature and the data was collected from developing sector of Pakistan.400 questionnaires were distributed but only 296 properly filled were received and the response rate was 74%.Data were collected from different project based organizations like telecom industry (Ufone, telecom enterprise), private organizations, Development sector Organizations: NGOs, Government developing sector (WAPDA and FWO).Data were collected by visiting work sites.

3.5Sample Characteristics

The sample characteristics of the respondents from whom the data were collected are indicated in the following tables.

3.5.1 Gender

Table 2: Gender Composition of Respondents

Gender	Frequency	Valid Percent	Cumulative Percent
Male	272	91.9	91.9
Female	24	8.1	100.0
Total	296	100.0	

Table 2 shows the gender composition of the sample in which males were 91% while the female appears to be only 8%.

3.5.2 Age

Table 3: Age Distribution of Respondents

Age	Frequency	Valid Percent	Cumulative Percent
18-25	135	45.6	45.6
26-33	71	24.0	69.6
34-41	58	9.6	89.2
42-49	21	7.1	96.3
50 and above	11	3.7	100.0
Total	296	100.0	

Table 3 shows the age-wise composition of the sample in which 45% of respondentshad 18-25 years of age, 24% were of 26-33 years of age, 9.6% in age group of 34-41 years, 7.1% in age of 42-49years and 3.7% of the respondents were in age group of 50 years and above.

3.5.3 Qualification

The next demographic factor was the composition of sample pertaining Respondents' qualification.

Table 4: Qualification of Respondents

Qualification	**Frequency**	**Valid Percent**	**Cumulative Percent**
Bachelors	122	41.2	41.2
Master	99	33.4	74.7
MS/M.Phil	71	24.0	69.5
PhD	4	1.4	100.0
Total	296	100	

Table 4explains that (41.2%) respondents werebachelor degree holders, (33.4%) possesses master degree, (24%) were MPhil and (1.4%) with PhD level degree.

3.5.4 Work Experience

The composition of sample regarding 'work experience' was the next demographic factor and its statistics are depicted in below mentioned table.

Table 5: Work Experience of Respondents

Experience	Frequency	Valid Percent	Cumulative Percent
5 and Less	137	46.3	51.1
6-13	85	28.7	75.0
14-21	52	17.6	92.6
22-29	17	5.7	90.8
30 and above	5	1.7	100
Total	296	100	

Table 5 shows that 46.3% of the respondents had 5 years and less experience, 28.7% were in the range of 6-13 years, 17.6%were in 4-21 years range, 5.7%respondents were having work experience range of 22-29years and only 1.7% had work experience of 30 years and above. This means most of the respondents were having work experience of 5 years and less years.

3.6Instrumentation

Four variables were measured using a closed ended questionnaire on five Likert scale which ranges from "Strongly Disagree to Strongly Agree" where the number 1 represents strongly disagree, 2 represents disagree, 3 represents neutral, 4 represents agree, 5 represents strongly agree.

3.6.1 Knowledge sharing

A six item scale developed by Park & Lee (2013)was used to measure knowledge sharing. The sample items include “We shared the minutes of meetings or discussion records in an effective way”, “We always provided technical documents, including manuals, books, training materials to each other”, “We shared project plans and the project status in an effective way”.

3.6.2 Innovation

A ten item scale developedby Wang& Wang (2012) was used to measureinnovation. Innovation was the variable which was considered a mediator and 5-point Likert scale was used to gather responses. The sample items include “Our organization is quick in coming up with novel ideas as compared to key competitors”, “Our organization is quick in new product launching as compared to key competitors”, “Our organization is quick in new product development as compared to key competitors”, “Our organization does better in coming up with novel idea as compared to key competitors”, “Our organization does better in new product launching as compared to key competitors”.

3.6.3 Creative self-efficacy

We measured creative self-efficacy by a 13 item scale. This scale was adopted from Yang and Cheng (2009) The sample items include “The belief that I would suggest new ways to achieve goals or objectives”, “The belief that I would come up with new and practical ideas to improve performance”,“The belief that I could search out new technologies, processes, techniques, and/or product ideas”, “The belief that I would suggest new ways to increase quality”. “The belief that I would be a good source of creative ideas”, “The belief that I would be not afraid to take risks”.

3.6.4 Project success

We measured project success by a 14 item scale. This scale was adopted from Aga and Vallejo (2016) and reported good reliability .930. The sample item is “The project was completedon time”, “The project was completed according to the budget allocated”, “The outcomes of the project are used by its intended end users”.

CHAPTER 4

RESULTS AND DISCUSSION

4.1Measurement Model

Confirmatory Factor Analysis (CFA) was used to justify the measurement model (Anderson &Gerbing, 1988) which consisted of four (4) latent variables: knowledge sharing, innovation, creative self-efficacy and project success. The combination of different fit indices: model chi-square, incremental fit index (IFI), Tucker-Lewis index (TLI), comparative fit index (CFI) and root mean square error of approximation (RMSEA) was used to evaluate the model fit. Measurement model delivered an appropriatefit to the data over the alternative models (χ^2/df=1.423, NFI=0.910; TLI=0.900; CFI=0.908; RMSEA=0.038) shown table 14. These CFAs results showed that five-factor model had satisfactory discriminate validity.

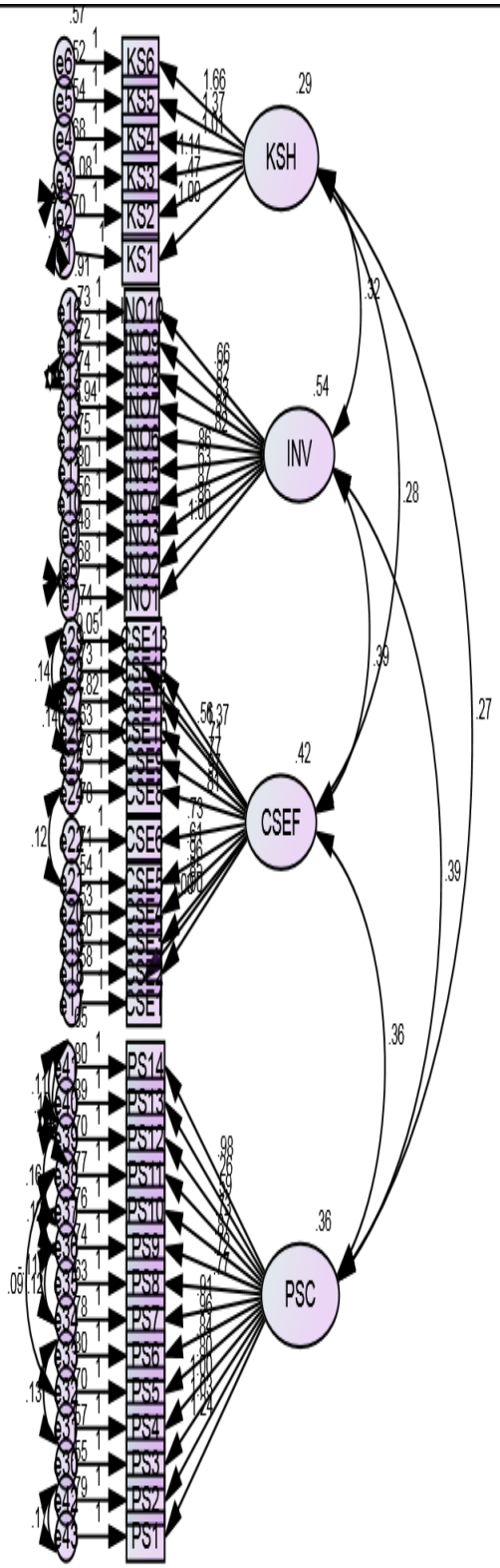


Figure 2: Confirmatory factor analysis

4.2 Covariates

Barrick et al., 2007 found that the size of the organization and age, performing the project, project team size, PM experience, project duration, educational level and gender have been influencing the project success. Results in table 7, shows insignificant differences in project success across gender (*F= .215, P> .05),*significant difference across age (*F=8.831, P< .001*), significant difference across education (*F= 6.971, P< .001*), significant difference across experience (*F=6 .724, P< .001*).

Table 6: One Way ANOVA

Covariates	F Value	Sig.
Gender	0.2	>.05
Age	8.8	<.001
Education	6.9	<.001
Experience	6.7	<.001

4.3Results forHypothesized Variables

SPSS was used for descriptive and correlation analysis. Finally, for Path analysis, the structural equation modeling (SEM) was used.

4.3.1Descriptive Analysis

The descriptive technique deals with summary statistics for different variables in a single table and calculates theiruniform values. The Basic details like sample size, minimum and maximum values, mean values and standard deviation values of the

data are included in the descriptive statistics. Descriptive statistics of the current data were given in Table 8.

Table 8illustrates that sample size was 296 for all the four variables. All variables knowledge sharing, innovation, creative self-efficacy and project success were rated on a five point Likert scale, such as 1 representing "Strongly Disagree" and 5 representing "Strongly Agree". Mean values show the concentration of responses. The mean values of knowledge sharing were 3.5535 which shows that respondent were agreed to share knowledge. The mean values of innovation were 3.5591 which indicate that respondents were agreed to increase innovation. The mean value of project success was 3.6170 which indicate that respondents were agreed that they have success in projects. The mean value of creative self-efficacy was 3.7815 that show respondents were agreed that they have strong creative self-efficacy.

Table 7: Descriptive Analysis

Variables	N	Min	Max	Mean	SD
Knowledge Sharing	296	1.57	5.00	3.5535	.69505
Innovation	296	1.70	4.80	3.5591	.70503
Project Success	296	2.07	5.00	3.6170	.56718
Creative Self Efficacy	296	2.08	3.92	3.7815	.66294

4.3.2 Correlations Analysis

Table 9presents the correlations for all theoretical variables.

Table 8: Correlations

	Variables	1	2	3	4
1	Knowledge Sharing	1	-	-	-
2	Innovation	0.60**	1	-	-
3	Project Success	0.62**	0.64**	1	-
4	Creative Self-efficacy	0.58**	0.58**	0.68**	1

296; *P<0.05 and **P<0.01;**. Correlation is significant at the 0.01 level (2-tailed). **p

*. Correlation is significant at the 0.05 level (2-tailed). *p

Results indicate a statistically significant positive relationship of knowledge with innovation(r=0.60**,p<.01),and knowledge sharing with project success(r=0.62**,P<.01) and creative self-efficacy(r=0.581**,P<.01) and also has a positive relationship with innovation and project success(r=0.64**,P<.01).) and creative self-efficacy(r=0.58**,P<.01) Positive relationship of innovation with creative self-efficacy(r=0.68**,P<.01).

4.4 Tests of Hypotheses

With acceptable discriminate validities established, the hypothesized model was then tested. We used four control variables knowledge sharing, innovation, creative self-efficacy and project success in the analyses while testing for hypotheses1, 2 and 3. The results are displayed in Table 10 and Table 11. Hypothesis1 stated that

knowledge sharing is positively related to project success. Results supported this relationship as indicated by the regression coefficient and associated significance level (β= *0.40, p*<. 01). Hypothesis 2 stated that innovation mediates the relationship between knowledge and project success. When innovation was regressed on both knowledge sharing and project success, the previous regression coefficient between benefit realization management and project success reduced in size (β*=0 .08, p<.001*). This showed that innovationpartially mediates the relationship between knowledge sharing and project success (CI values between.20 to.50). Hence Hypothesis 2 was partially supported. Hypothesis 3 states that moderating role of creative self-efficacy between knowledge sharing and innovation. Results, established this relationship, as indicated by the regression coefficient (β= *.61, p*<.001). Hence Hypothesis 3 was positively supported.

Table 10

Table 9: Path Coefficients in the Baseline Model

Structural Path			**Path Coefficients**
Knowledge sharing	→	Project Success	0.400***
Knowledge sharing	→	Innovation	0.084
Innovation	→	Project Success	0.450**
KSxCSE	→	Project Success	0.618***
CSE	→	Project Success	0.48

**p< .05, **p< .01, ***p< .001, Knowledge sharing(KS), Innovation(INO),Project Success(PS), Creative Self Efficacy(CSE)*

Table 10: Path Coefficients in the Baseline Model (Without Mediation)

Structural Path			Path Coefficients
Knowledge sharing	→	Project Success	.609***
Age	→	Project Success	0.043
Qua	→	Project Success	-0.022
Exp	→	Project Success	0.065

**p< .05, **p< .01, ***p< .001, Knowledge sharing(KS), Innovation(INO),Project Success(PS),Creative Self Efficacy(CSE)*

Table 11: Mediating role of INO between KS and PS

Structural Path					Path Coefficient	Bootstrap	
						LLCI	ULCI
knowledge sharing	→	ino	→	Project Success	0.40	0.20	0.50

**p< .05, **p< .01, ***p< .001, Knowledge Sharing, Innovation, Project Success,Creative self-efficacy.*

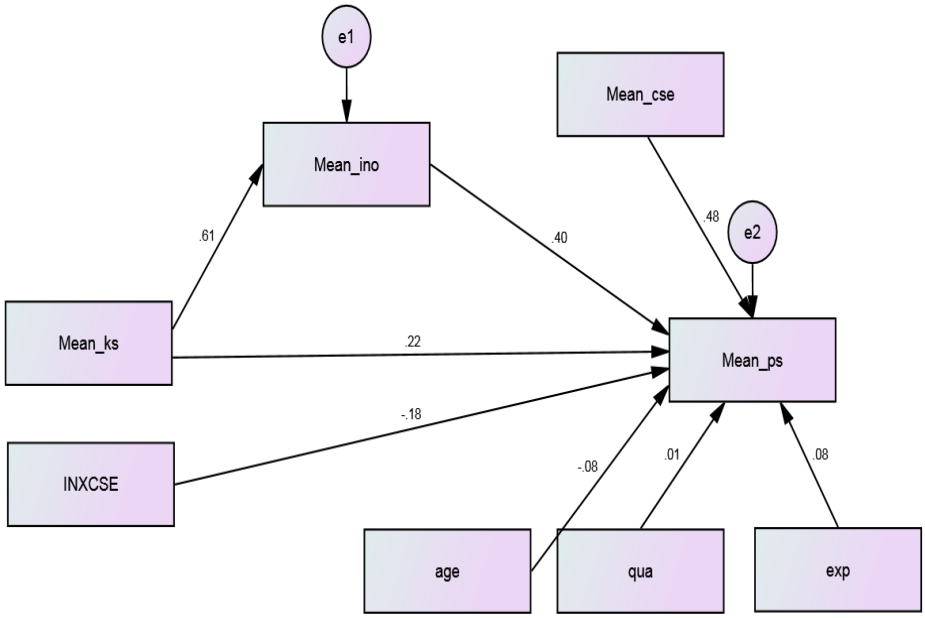


Figure 3: Path Modeling

4.6 Hypothesis summary

H1: Knowledge Sharing is positively associated with Project Success(Accepted)

H2: Mediating role of Innovation between knowledge sharing and project success (partially accepted)

H3: Moderating role of Creative Self Efficacy between Knowledge Sharing and Project Success (accepted)

4.6Discussion

This study focuses on the impact of knowledge sharing on project success with themediating role of innovation andthe moderating roleof creative self-efficacy. The results supported the first hypothesis which is “knowledge sharing is positively

associated with project success". By increasing knowledge sharing in project based organizations, the probability of projects success also rises.

Project managers of the project based organizations should share knowledge with their subordinates. They should also supportmembers of differentdepartments to collaboratewith other team membersto generate new information.This knowledge should be utilized to solve problems andmakethe work more capableand successful(Yang,Chen & Wang 2012). The results of this research show that project success can be obtained by strengthening knowledge sharing in the organization.

Knowledge should be well documented and saved where it can be easily approached and utilizedby everyone in the organization. Project team members should utilize knowledge andcreate new knowledge and ideas for the successof different projects.Knowledge should easily be accessible for all members in the organization. They should be able to share this knowledge with other colleagues and work for the betterment of the projectsand make them more successful.

Knowledge allocation among team members of the project takes place when subordinates move in more than one team on the basis of their skills (Gruenfeld, Martorana, & Fan 2000).The project manager should call aninformal meeting to share knowledge with team members whereteam members can contact other experts directly to solve their problems. In some project based organizations top management can findrelated information from other team members of the project and act as a source of knowledge sharing.

At times when employees feel difficulty in finding required knowledge in databases, they develop informal practices for knowledge sharing between project team members on the bases of their project needs. (Mueller &Julia,2015). Effective knowledge

sharing across all projects will decrease the organizational expense of similar efforts for same problems solving and also save time.

Knowledge sharing in project based organizations supports better project performance and also helps in the creation of new knowledge. For creating new knowledge project managers encourage team members to work together. Those organizations that saved their knowledge in documented form other staff can utilize that knowledge for the success of projects.

Communication playsimportant role in knowledge sharing because it is positively linked with knowledge sharing. E-mail, internet and document management system are some efficient tools that can be used to sustain knowledge management practices (Yang, Chen & Wang 2011).Project performance strongly associated with the knowledge shared, sharing effective knowledge with subordinates leads the project to success.

In project team member's knowledge sharing increase effectiveness of projects and creativity of subordinates, it makes better job performance and increase knowledge sharing among subordinates. Knowledge sharing among employees is performedwhen they trust each other (Navimipour&Charband 2016).Knowledge sharing helps project managers in effective decision making for the projects.

Successful team performance can be achieved when members of a project share knowledge with other team members encouraged by the difficulties they face in project which leads to project success. Better working relationship with subordinates are important for projects (Park &Lee 2013).For knowledge management workers need time to reveal experience, communicate with other team members and to saved their knowledge in documented form (Grillitsch, Stingl & Neumann, 2007).

Effective communication appears to be very important for success of organizational projects, good relationship between project partners also important for knowledge sharing(Niedergassel &Leker, 2011).Training also play important role in knowledge sharing, through different knowledge sessions employees share new knowledge with each other, with the help of these sessions knowledge and transfer ideas from one person to another (Fong, Ooi, Tan, Lee&Chong, 2011).

Some members are paying attention to share their information with others, while some are not interested (Teh & Sun 2012). In this study results show that knowledge sharing is the most important factor in the project success. Project managers increase knowledge sharing among project team members by mentoring, trust, reward and collaboration. Trust is an important factor in knowledge sharing; project managers will not able to share their valuabledata with other team members if theydon't trust them.

Another objective ofthis study was focused on the mediating role of innovation between knowledge sharing and project success, that's how innovation mediates between knowledge sharing and project success.It is partially mediating the relationship. Knowledge sharing have no positive effect on innovation, not strongly associated with innovation,but innovation has a positive effect on project success, it is strongly associated with project success. Through innovation projects become more successful.When organizations bring innovation in their projectsasthey become more successful.Through different innovation opportunity team members achievesabetter outcome.

For innovation project manager should focus on the customer's needs,customer's wants are more important for project success. The project manager should give value

the team members, and support their ideas and encourage flexibility.New projects are the way business leaders formulate strategic moves and create new business ventures,in facing the future, firms need to understand how and why the innovation environment is driving them to build project-based businesses to cope with changing markets and technologies (Davies, Brady, Prencipe&Hobday 2011).

Innovation is strongly associated with project success. The project manager should keep alignment with market, product and technology strategy.The manager should also keep focus on market and customer attractiveness, manufacturing and supply chain feasibility and also give importance the ideas of other team members for different innovative ideas for theorganization.

Innovation is essential for success of any project. For innovation in project based organizations, innovative culture is necessary where everyone can give their innovative ideas independently. Management used suitable source for production of new products or services, for innovation management can bring little change or some addition in the existing products or services(Balachandra&Friar, 1997).

Results show that innovation makes projectsmore successful. For innovation, it's necessary to give freedom to your workers to work independently. Project managers should make it possible for their team members to convert their innovative ideas into reality, without using the right resource ideas cannot be converted into the reality. For implementation of innovative culture in project based organizations it is important that all departments of organizations are included.

The organization improves efficiency with innovation, due to slow decision making in the organization innovation is difficult(Wiewiora,Chang&Tywoniak, 2015). For greater implication in organizations are innovative projects like managerial,

marketing, process and organizational innovation (Arttoa,Kulvika, Poskelab & Turkulainena, 2011). In this study innovation partially mediates the relationship between knowledge sharing and project success. Project based organization used innovative technologies for collaboration and information sharing.

When organization brings an innovation in the project must focus on the needs of customers, it is important that what customers wants, change project according to the needs of customers. Employees increase productivity by creating a new process which increases competitive advantages. Innovative employees are more motivated and creative and bring new ideas for project success.

When the size of the organization is large has a great effect on the success of innovative, project, In the early stages of innovative project key variables to success in theinitiation, development and execution of innovative project can help to improve human resource management of the organization (Benita, Segura, Marcos & Sanchez, 2015).

The most innovative organizations hire creative people and increase their creativity by giving them training and then they bring more innovative ideas for the success of projects and create an innovative culture in the organization.

The 3rd objective of this study was to find amoderating role of creative self-efficacybetween knowledge sharing and innovation. The results supported the 3rd hypothesis which is “moderating role of creative self-efficacy between knowledge sharing and innovation”. Creative self-efficacy is strongly linked with knowledge sharing and innovation.Creative self-efficacy strengthens the relationship of knowledge sharing and innovation.

Team members with high creative self-efficacy develop more innovative ideas and work outcome as compared to other team members with low level of creative self-efficacy. High level of creativeself-efficacyenhances thecreativity of the team membertowards the achievement of project success (Mittal &Dhar 2015).Innovative behavior in the organization increases the level of creative self-efficacy.

The project manager should empower the project team members and also trust them, due to empower the team members their level of creativeself-efficacy becomes high and bring more innovative ideas to make theproject successful.When manager empowers team member they feel more confident, belief their own abilities, they are more likely toshare their work and ideas when they feel their ideas and efforts are respected and manager give importance to their ideas.

Project managers should develop the skills of their team members and make aneffort to increase their creativeself-efficacy for innovation. Through knowledge sharing creative self-efficacy become increasing in theemployee's/team members and with high creative self-efficacy innovative behavior increased.

Competitive advantages of organizations depend on creative team members who gives novel ideas for the projects, when project manager share information with employees they become more creative and come up with more innovative ideas and solve problems (Carmeli, Palmon&Ziv, 2010). Organizations train their employees to develop high level of creative self-efficacy in them. People with increased levels of creative self-efficacy are more innovative than the people who lack it.

High creative self-efficacy positively associated with the creation of innovative and helpful ideas and creative self-efficacy direct effect on the employees' creativity (Richter, Hirst, Knippenberg & Baer 2012). When project managers shared

information with their subordinates then this develops trust among project managers and subordinates, trust increases their creative self-efficacy.

Team performance is improved and probability of project success is increased by high level of creative self-efficacy which makes a better team.Thoseproject team members from whom project managerheld higher creativity expectations are rewarded byproviding themwith more resources, encouraged for the sharing of information,collaboration, and creative goal setting and wererecognized for their creative efforts (Tierney&Farmer2004).

Innovative behavior consists of creating and spread new ideas in the organization and trying to use those innovative ideas for success. Most creative people are more confident in the workplace and shows high job performance.The manager should empower their employees, when employees are empowered they become more creative and more creativity brings more innovative ideas for the project success.

Employees in diverse task settingsin different tasks, development of creative self-efficacy and employee job performance are different (Tierney&Farmer 2002).Highly creative people developed their ability to observe things and bring innovative ideas. Innovation is based on information sharing, project managers need to expand their knowledge.

CHAPTER 5

CONCLUSION AND RECOMMENDATIONS

5.1 Recommendations

5.1.1Theoretical implication

The current study has many contributions to the project management domain of knowledge sharing and project success. In the previous literature, no clear information was found about the effect of knowledge sharing on project success. The present research confirmed thatknowledge sharing is positively associated with project success. The mediating role of innovation between knowledge sharing and project success was also conceptualized so it was revealed that innovation partially mediates this relationship. The finding of current study also shows thatthe creativeself-efficacy moderates betweenknowledge sharing and innovation.Therefore, strengthening the relationship betweenknowledge sharingand innovation.

5.1.2. Practical implication

The current study has several managerial implications. It demonstrates that knowledge sharing improves project success.Therefore, it is suggested thatproject managers in different project based organizations should share knowledge with their team members.Managers should also ensurethat this knowledge willnot be misused in or out of the organization.When project managers share knowledge with their team member they should also trusttheir subordinates that they willnot misuse this information. This sharing of knowledge and innovative behavior of the manages ultimately leads to the project success. Successful implementationof project activities, consequently enables the organization to achieve the desired objective of a particular project.

The current study suggests that managers of the project base organization must realizehow to increasethe creative self-efficacy of team members so that they bring innovative ideas for the project success. Managers can do this byempowering their subordinates byrespecting their ideas and efforts. Therefore, employees can identify the impact of their efforts and workon the success of different projects.Managers can also empower their employees by training toimprove theirskills which will enable them to perform their role more efficiently, effectivelyand confidently.

5.1.3 Strengths, limitations, and future directions

A robust methodological approach has been used in the current study. To avoid the possible effects of single source bias and common methods, data related to knowledge sharing, innovation, creative self-efficacy and project success were collected from multiple project based organizations through project managers and team members.

There are some limitations, which future researchers should be aware of. Firstly, due to time constraint, only one mediator and moderator were tested. Future researchers can improve the model by checking other mediators like motivation and job involvement. They can also check other moderatorslike communication and personality traits. Secondly, the data were collected once. The future researchers can use time lag for data collection. Thirdly, the data were collected only from only one city of Pakistan so it was very limited. The future researcher can improve the data collection method and collect data from different cities and countries. They can also check other traits of knowledge like knowledge management, knowledge transfers and implicit or explicit knowledge impact on project success.

5.2 Conclusion

The purpose of the research is to discover the impact of knowledge sharing on project success with mediating role of innovation and moderatingrole of creative self-efficacy. Tofind theobjectivityof the result, we distributed 350 questionnaires and collected 296 and only those 296 questionnaires were considered for analysis. According to the result of the study, H1 and H3 are accepted while H2, which is the mediating role of innovation between knowledge sharing and project success, is not fully accepted which means that it partially mediates between the relationship. Justifications of hypothesis acceptance and rejection were discussed and practical and theoretical implications of the study were also discussed.

Managers in project based organizations must share knowledge with their employees which should be properly documented and accessible toeveryone. This increases creative self-efficacy of their subordinates. The manager should also focus on demands of the customers while considering latest market trends andgrowing technology. When managers focus on their customers they can easily assess the changes required according to their needs.

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Appendix

Questionnaire

Dear Respondent,

I am a student of MS Project Management at Capital University of Sciences and Technology, Islamabad. I am conducting a research on impact of knowledge sharing on project success with mediating role of innovation and moderating role of creative self efficacy. You can help me by completing the questionnaire, which I think you will find quite interesting. I appreciate your participation in my study and I assure that your ***responses will be held confidential*** and will only be used for education purposes.

Section 1: Demographics

Gender

1	**2**
Male	Female

Age

1	**2**	**3**	**4**	**5**
18-25	26-33	34-41	42-49	50 and Above

Qualification

1	**2**	**3**	**4**	**5**
Matric	Bachelor	Master	MS/M.Phil.	PhD

Experience

1	**2**	**3**	**4**	**5**
5 and Less	6-13	14-21	22-29	30 and Above

Section 2: Knowledge Sharing

Please insert a check mark **(**√**)** in the appropriate column to indicate whether you agree or disagree with each of the following statements:

Knowledge sharing		1	2	3	4	5
		Strongly Disagree	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
1	We share the minutes of meetings or discussion records inan effective way.					
2	We always provided technical documents, including manuals,Books, training materials to each other.					
3	We shared project plans and the project status in an effective way. .					
4	We always provided know-where or know-whom informationto each other in an effective way.					
5	We tried to share expertise from education or training in aneffective way.					
6	We always shared experience or know-how from work in aresponsive and effective way.					

Section 3: Innovation

Please insert a check mark **(**√**)** in the appropriate column to indicate whether you agree or disagree with each of the following statements:

Innovation		1	2	3	4	5
		Strongly Disagree	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
1	Our organization is quick in coming up with novel ideas as compared to key competitors.					
2	Our organization is quick in new product launching as comparedto key competitors.					
3	Our organization is quick in new product development as comparedto key competitors					

4	Our organization is quick in new processes as compared to keyCompetitors.					
5	Our organization is quick in problem solving as compared tokey competitors.					
6	Our organization does better in coming up with novel ideas ascompared to key competitors.					
7	Our organization does better in new product launching as comparedto key competitors.					
8	Our organization does better in new product development asCompared to key competitors.					
9	Our organization does better in processes improving as comparedto key competitors.					
10	Our organization does better in management improving asCompared to key competitors.					

Section 4: Project Success

Please insert a check mark **(√)** in the appropriate column to indicate whether you agree or disagree with each of the following statements:

Project success		**1**	**2**	**3**	**4**	**5**
		Strongly disagree	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
1	The project was completed on time.					
2	The project was completed according to the budget allocated.					
3	The outcomes of the project are used by its intended end users.					
4	The outcomes of the project are likely to be sustained.					

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

Section 5: Creative Self Efficacy

Please insert a check mark **(√)** in the appropriate column to indicate whether you agree or disagree with each of the following statements:

Creative Self Efficacy	**1**	**2**	**3**	**4**	**5**
	Strongly Disagree	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**

1	The belief that I would suggest new ways to achieve goal or objectives.					
2	The belief that I would come up with new and practical ideas to improvePerformance.					
3	The belief that I could search out new technologies, processes, techniques,and/or product ideas					
4	The belief that I would suggest new ways to increase quality.					
5	The belief that I would be a good source of creative ideas.					
6	The belief that I would be not afraid to take risks.					
7	The belief that I would promote and champion ideas to others.					
8	The belief that I would exhibit creativity on the job when given theOpportunity to.					
9	The belief that I would develop adequate plans and schedules for theImplementation of new idea.					
10	The belief that I would often have new and innovative ideas.					
11	The belief that I would often come up with creative solutions to problems.					
12	The belief that I would often have a fresh approach to problems.					
13	The belief that I would suggest new ways of performing work tasks.					