

**CAPITAL UNIVERSITY OF SCIENCE AND TECHNOLOGY,  
ISLAMABAD**



**Influence of Knowledge Sharing on  
Project Success  
An Exploratory Research through  
Stakeholder Inclusiveness and  
Stakeholder Satisfaction**

by

**Muhammad Irfan Mustafa**

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

in the

**Faculty of Management & Social Sciences**

**Department of Management Sciences**

2018

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*In the name of Allah, Most Merciful, Most Compassionate*

*All praise is unto Allah, Lord of the Worlds, and Sustainer of each and every atom in existence. Exalted is He, above all which is associated with Him. There is none like unto Him, and He is the All Hearing, All Seeing. He is the Knower of Innermost Secrets, and most hidden thoughts of men. He is the Light of Heavens and the Earth. And I bear witness that our master, the Beloved of Allah Muhammad, is His servant and messenger. He was sent with the Religion of Truth to make it manifest over all the other religions. He was sent as a witness, a bringer of glad tidings, a Warner, a caller to Allah by His leave and as luminous lamp. May the peace and blessings of Allah Most High be showered upon him, and upon his family, and upon his wives, and his companions one and all. And may the mercy of Allah be upon those who followed him of the Tabiein and their students and those who follow in their footsteps, biting onto their way with their molars.*

*This thesis is dedicated to my mother and late father, who taught me how to read and write.*



CAPITAL UNIVERSITY OF SCIENCE & TECHNOLOGY  
ISLAMABAD

**CERTIFICATE OF APPROVAL**

**Influence of Knowledge Sharing on Project Success - An  
Exploratory Research through Stakeholder Inclusiveness and  
Stakeholder Satisfaction**

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## *Acknowledgements*

All this work is done because of the great blessings of **Allah Subhanhu Watalaa** the most Merciful and most Compassionate. Without His will and special blessings I would not be able to write a single word. May Allah Subhanhu watalaa forgive my sins and give me real success in this world and hereafter. Aameen

I would like to express my thanks to **Dr. Arshad Hassan** for his support and help throughout this research with discussing the best manner in which this current volume could be presented.

Also, I wish to thank all those who helped during this research by support and looking at the research, especially to **Mr. Umar Toor** for his continuous pushing along with my family, friends and colleagues.

My thanks also extend to **Dr. Shabbar Hussain (Ex Program Manager MS Project Management)** for guiding, supporting and motivating me throughout the MS Program, specifically for this research and for giving his valuable time resulting in very productive and rewarding discussions.

I am also very thankful to **Dr. Aqeel Sarwar** along with all the Researchers conducting amazing research projects from National Agricultural Research Centre (NARC) Islamabad who made it possible to get all the data of the research projects executed by NARC based on which the valuable conclusions of this research has been established.

It would be really unfair if I dont mention the kind hearted, amazing reassurance and support through continuous feedback from **Mr. Burhan Ibraheem** of CUST Bookshop.

## *Abstract*

This research was carried out to explore the possibilities of acquiring and sharing knowledge through extensive but careful stakeholder inclusiveness leading to more stakeholder satisfaction and resulting in better project success rate. This research also aimed to evaluate the mediating effects of stakeholder inclusiveness and stakeholder satisfaction in serial between knowledge sharing and project success. The convenience sampling technique was used to collect data from the project based organizations involved purely in research & development based in Islamabad. The 285 responses were used for analysis out of 500 questionnaires distributed both electronically and physically. The outcome of this research advocated that both stakeholder inclusiveness and stakeholder satisfaction partially mediates the relationship between knowledge sharing and project success. This investigation establishes the base and clears the way towards developing a framework for knowledge sharing through calculated stakeholder inclusiveness which leads to stakeholder satisfaction.

**Keywords:** Knowledge Sharing, stakeholder inclusiveness, stakeholder satisfaction, project success.



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# Chapter 1

## Introduction

### 1.1 Background

In today's fast moving and rapidly changing world, to achieve the organizational objectives both in efficient and effective manner, it is very important to execute the processes for meeting these objectives in efficient and effective i.e. in quick time and specific to requirements. For this more and more organizations are adopting project based approaches to meet such objectives.

Project Management is like managing a circus, where every participant not only needs to know the acts but timing along with all the other acts. It's the synergy among all the acts which leaves the audience stunned and saying wow. In other words it is the acknowledgement of knowledge being disseminated with well-defined actions and execution time frames. Similarly knowledge management and sharing is of critical importance in project management for the successful delivery of requirements and to have that required synergy among all the actions performed by the different teams and individuals which guides to achieve that wow from audience of that project.

In the heavy haze of different concerns, it is a norm to overlook the importance of the knowledge earned through the experience gained while working on either similar projects or in similar environments. While mentioning the factors which lead to success consistently Cooke-Davis, (2002) has explicitly

mentioned the need of an effective mechanism, not only to learn from experience but also to combine explicit and tacit knowledge while making learning and implanting that learning into existing practices and processes for the successful completion and continuous progression, fun.

Different authors have defined knowledge sharing as the act of making sure that the concerned knowledge is available to others concerned within the organization by the knowledge owner or knowledge provider (Mooradian, Renzl, & Matzler, 2006; Ipe, 2003; Szulanski, 1996) and it does have a substantial impression on the performance of the organization (Yi, 2009).

Different organisations develop the competitive advantage among themselves mostly on the basis of intangible resources such as knowledge and transferring process overlooking their tangible resources (Zareie & Navimipour, 2016). The concept, skill, experience and vision collectively represents the intangible resource of knowledge and provides a framework for knowledge creation, evaluation, and usage (Soltani & Navimipour, 2016). Van Den Hoof, Elving, Meeuwsen, & Dumoulin, (2003) argued that knowledge exchanging and creating process may be explicit or implicit. In a pursuit to achieve competitive advantage managing knowledge is of a critical importance for organizations and can be done so by identifying, systematising and performing the knowledge research (Al-Hawamdeh, 2003).

Knowledge is power (Anonymous, n.d.) and previous research has shown that if the practice of knowledge sharing is executed appropriately, there are better chances of getting desired results in the shape of a successful project (reference). In the circus of project management, project stakeholder management is a jugglers act as to balance the competing, identified or unidentified requirements, among different stakeholders requires a serious skillset. It is a core activity within the domain of Project Management (Project Management Institute, 2008).

Dalcher (2009) along with Jepsen and Eskerod (2009) pointed to the fact that a core problem which laid the foundation to many unsuccessful projects is stakeholder disappointment. Different stakeholders usually interpret project success

factors differently (Davis, 2014), which provide the indication that many of the stakeholders are not happy due to projects inability to fulfil their expectations (Shenhar & Dvir, 2007). Many stakeholders have conflicting interests which is issue driven i.e. certain encounter at a specific point in time (Eskerod, Huemann & Savage, 2015).

Stakeholder inclusiveness suggests that broad groups of stakeholders must be included due to the fact that interrelations among stakeholders exist (Eskerod, Huemann & Ringhofer, 2015). While advocating the application of stakeholder inclusiveness in a project setting as a means of more satisfied stakeholders, Eskerod, Huemann and Ringhofer (2015) also put emphasis on chances of lost focus on stakeholders with critical resources for the projects success along with escalated expectations of stakeholders.

Although literature review suggests that work has been done on the impacts of stakeholders inclusiveness as Eskerod, Huemann and Ringhofer (2015) mentions along with Project Management Body of Knowledge also known as PMBOK by Project Management Institute (PMI) (2008) which confirms the importance of Project Stakeholder Management supported by Dalcher (2009) and Japsen and Eskerod (2009), there is limited research performed to develop a comprehensive mechanism for knowledge sharing through stakeholder inclusiveness contributing towards stakeholder satisfaction leading ultimately towards successful completion of the projects.

Due to the unnoticed knowledge owned by different stakeholders, members of project execution teams invest their valuable time and resources in obtaining the very same knowledge without any real need of reinventing the wheel. Stakeholders may not be able to present or share their stance which may be of critical importance. This inability may come to an end at any time of the life of the project or even after completion. The reasons of formation and de-formation of this inability are beyond the scope of this research but establishment and disestablishment of such inability, is of critical importance when measuring project success via stakeholder satisfaction. The current study intends to discover the effects of mediating role of both stakeholder inclusiveness and

stakeholder satisfaction on the relationship between knowledge sharing and project success. The results of this study contributes towards the decision making especially when it comes to engaging different stakeholders in the project settings of organisations in the countries like Pakistan where knowledge sharing and other such cultural variables plays an important role in establishment of stakeholder disappointment.

Disseminating knowledge is the deed performed by the knowledge provider who makes knowledge available to benefit others within or outside the organization to achieve common goals (Ipe, 2003; Mooradian et al., 2006; Szulanski, 1996). Szulanski (1996) on the basis of the Social Exchange theory stated that knowledge dissemination is not an exchange of knowledge between knowledge suppliers and beneficiaries but is dependent only on the behaviour of knowledge disseminator. Teng and Song (2011) identified two natures of knowledge sharing, solicited or voluntary. According to them when knowledge sharing happened as a result of sending and receiving request for knowledge is called solicited knowledge sharing but in case of voluntary knowledge sharing is an exchange without any previous requests for knowledge. This stance of Teng and Song (2011) is in disagreement with the earlier viewpoint of Davenport (1997), who branded knowledge sharing purely as a voluntary act and instated that the term knowledge sharing itself means that possessor of knowledge presents it voluntarily to benefit others without any obligation or pressure on them.

There are three different types of knowledge shared by stakeholders, know-how based on the subjective knowledge gained through experience, know-what is the objective knowledge about activities, jobs, etc. and dispositional knowledge consists upon an individuals aptitude, talents and capabilities (Lowendahl, Revang, & Fosstenlokken, 2001). It is a common practice of stakeholders to evaluate the shared knowledge among them and most of the times scattered stakeholders assumed that knowledge shared among them is unable to describe the common interests or objectives of the tasks on hand in a straightforward manner but rather focuses on the adopted processes and overall common goals



(Leinonen & Bluemink, 2008). New knowledge construction collaboratively requires the explanation of shared common frame of reference to all involved stakeholders leading to the successful knowledge sharing by communicating and interacting with all stakeholders (Leinonen & Bluemink, 2008; Cohen & Bailey, 1997). Although in the context of software development projects, Faraj and Sproull (2000), suggested that it is very important for stakeholders to have the ability to manage the knowledge interdependencies effectively i.e. who knows what, where to find the required knowledge, from who they can ask and how accurate that knowledge is, through expert coordination.

This was already supported by the existing research that stakeholders individual knowledge should be given importance and managed in effective and efficient manner to achieve better project success rates (Andrews, & Delahaye, 2000; Bartol & Srivastava, 2002; Refaiy & Labib, 2009). Although it is not possible to put a natural function of knowledge sharing on halt which happens automatically but organised and managed knowledge sharing does provide a phenomenal impact on the success (Staples & Jarvenpaa, 2001). In previous studies, Weiss (1999) had already put great emphasis on the effective and efficient management of stakeholders knowledge sharing attitude and found that if not provided with the opportunity in right fashion, knowledge held by the stakeholder may go to waste and unemployed.

Recent and previous research has confirmed that knowledge sharing among different stakeholders leads to greater chances of achieving success even in different types of projects of even different domains (Lee, Gillespie, Mann, & Wearing, 2010; Berends, van der Bij, Deackere & Weggeman, 2006;; Faraj & Sproull, 2000).

Review of the existing literature reveals that the knowledge sharing to achieve common goals do well only when the stakeholders enthusiastically participate in knowledge sharing supported by competent knowledge management among stakeholders of projects under progress or the new ones (Lee, et al, 2010; Berends

et al, 2006). Although investigation of Cabrera and Cabrera (2005) have detected a flaw in this approach that stakeholders feel uncomfortable about sharing knowledge with others and due to this reason total output of the project team can face decline or even failure (Zarraga & Bonache, 2003).

Srivastava, Bartol, and Locke (2006) have suggested that by increasing the practice of knowledge sharing among the different stakeholders results in better utilization of existing knowledge through which improved decision making among project teams can be achieved by evaluating different practiced alternatives. Jewels and Ford (2006) has diverted the attention towards the evidence of low success rate of projects, continuously coming through empirical research which also recommends to manage knowledge sharing and trust development effectively and efficiently in order to achieve escalation in project success rate (Faraj & Sproull, 2000). Previous studies have recognised and appreciated the significance of knowledge sharing and its preservation to utilise the preserved knowledge later even after the status of stakeholders change or they lose the stake in the project (Lin, 2006; Liebowitz, 2002). On the other hand, scholars realise the significance of exploration of critical aspects which directs human behaviour towards knowledge sharing (Rivera-Vazquez, Ortiz-Fournier & Flores, 2009; Cronk & Ragsdell, 2008; Zarraga & Bonache, 2003).

The criticality of knowledge sharing rises due to the fact that knowledge sharing bridges the stakeholders and project team resulting in cutting the costs of project and fine-tuning the performance of project execution team but there is a lack of ample and organised research which answers comprehensively about the knowledge sharing mechanisms (Navimipour & Charband, 2016).

Zareie and Navimipour (2016) suggests that the criteria to judge competitiveness among organisations often comprises on the intangible assets including knowledge sharing and how it get transferred among different stakeholders of the organisation. And this is due to the fact that knowledge is taken as a framework to create, evaluate and use the information in the favour of project team which comprises on the concept, skill, experience and vision of the stakeholder (Soltani & Navimipour, 2016).

According to Van Den Hoof, Elving, Meeuwse & Dumoulin (2003) exchange and creation of knowledge may be explicit or implicit. This exchange and creation of knowledge has earned the strategic importance due to its ability to make different stakeholders not only receive knowledge through sharing but also to use it in order to increase their productivity Wang & Ko, 2012). Mueller (2014) also provided evidence of positive association between knowledge sharing and quality performance by project teams. Other scholars have supported the fact that knowledge sharing definitely contributes significantly towards the success of any project (Navimipour, Rahmani, Navin & Hosseinzadeh, 2015; Navimipour, 2015a; Navin, Navimipour, Rahmani & Hosseinzadeh, 2014).

It is agreed that effective and efficient utilisation of the knowledge, abilities and skills of experts to realisation of complex and inventive work is not possible in the absence of effective knowledge sharing (Zhang, De Pablos, & Zhou, 2013). Much of the emphasis now a days is given to explore the mechanisms of encouraging stakeholders behaviour of knowledge sharing which depends on the social capital (Zhang et al., 2013). Navimipour and Charband (2016) have explicitly stated that knowledge sharing among the different stakeholders of the project positively influences the performance and creativity. The stakeholders belonging to different nationalities are considered as knowledge creation sources (Navimipour & Charband, 2016) and can contribute heavily towards the analysis of geographically dispersed customers (Navimipour & Soltani, 2016). This view of Navimipour and Soltani (2016) is also supported by the literature as evidence of critical information for success coming through the stakeholders from different cultures, backgrounds, languages and preferences (Barrios Calderon & Daz Jimenez, 2015).

According to Bechky (2003) even some project based organisations overlook the importance of knowledge sharing between the stakeholders and this could be due to challenges incurred when knowledge has to be transferred across the national boundaries (Hsiao, 2008) as effective knowledge dissemination is a key to knowledge sharing. Literature on knowledge management suggests that organisations only consider individual knowledge sharing important and consider

their job done by providing the hierarchical structure or just do it for sake of closed research settings (Mueller, 2014; Wasko & Faraj, 2005). Muellers (2014) view is supported by other researcher who points towards the critical need of exploring the factors which influence the knowledge sharing among stakeholders of the project (Mueller, 2014; Wasko & Faraj, 2005). There cant be any denial about the importance of tacit knowledge especially when it comes to incorporated project team working for success by achieving the common objectives. Previous studies have recognised tacit knowledge as one of the critical contributor towards success within the integrated project teams and attempted to find out how other factors influence tacit knowledge sharing behaviour (Zhang & He, 2015). The results of the exploration studies of Zhang and He (2015) showed trust (swift, identification based, information based, personal benefits, lack of self-efficacy) as one of the influencer of tacit knowledge sharing behaviour.

The evidence found in literature leads to conclude that to live in world elasticity and remain attractive organisations must engage themselves in the practice of knowledge sharing (Navimipour & Charband, 2016).

Navimipour and Charband (2016) have discussed the six significant contributions knowledge sharing makes first being catalyst for increase in productivity, second being facilitation of sustenance through competitive advantage, third being improved project efficiency and learning, fourth being time savings, fifth being critical success factor by encouraging invention, agility development and increasing value, and sixth being ingredient of quality by improving competitive advantage over competitors.

As knowledge sharing enriches the success it does have a negative side as well, firstly sometimes it asks for doing a favour to a rival, secondly, stakeholder fear losing their stake if information is shared, and thirdly traditional school of thought advocates stakeholders against knowledge sharing. All of this is arguable as adoption of good project management practices contributes towards building a more productive environment (Navimipour & Charband, 2016).

In project management, most of the researched topic is project success and rightly so as it is what the project or project management is for, but researchers are unable to agree upon one definition of project success which differ substantially among different researcher and practitioners (Judgev & Mller, 2005). Project success, being multidimensional, consists upon both i.e. the success of project itself (impact and effectiveness) and success of project management (efficiency of project team) (Judgev et al., 2001; Shenhar et al., 1997). Mller and Turner (2007) suggested to define project success in terms of success criteria to have a common understanding about project success and ability to measure it i.e. a move to enrich iron triangle with other critical success factors (Mller & Judgev, 2012; Shenhar & Dvir, 2007; Judgev & Mller, 2005; Atkinson, 1999).

## 1.2 Research Gap and Present Study

The fact that its the stakeholders of any project who can, in reality, either take the project to success or bring it down to a failure and this is done by either supporting the project or by interferring in a project respectively (Rowley, 2013). The stakeholder engagement at the earliest possible time in the project leads to less probibility of stakeholder inititated changes resulting in low chances of project failure. To engage stakeholders positively, they must be identified and included in the list of stakeholders for management. Project Management Institute also has given loads of emphasis on stakeholder management and its been part of knowledge areas since the fifth edition of Project Management Body Of Knowledge (PMBOK). Literature also suggests that one of the most critical things for the success of the project is managing stakeholders well and in time (Baker, 2012).

The recent emphasis on stakeholder inclusivenses lead to carry out research in order to discover the importance of the stakeholder inclusiveness and its consequences (Eskerod, Huemann, & Ringhofer, 2015; Msomphora, 2015). Eskerod, Huemann, and Ringhofer (2015) along with Solli-Sther, Karlsen and Van Oorschot (2015) suggested that although stakeholder inclusiveness is an

important and somewhat critical practice for project success but it would be attention-grabbing to study the interplay between internal and external actors and how knowledge sharing can be related to stakeholder inclusiveness. Rolstads, Pinto, Falster and Venkataraman (2015) also mentioned that it would be rewarding to find out how stakeholder inclusiveness can impact on project related decision making. Further research, is required to comprehend the extent and nature of bond between stakeholder inclusiveness and satisfaction level while keeping all the factors inducing their relationship in view (Msomphora, 2015).

Based on the above recommendations for future research, this current study finds out the impact of knowledge sharing on project through stakeholder inclusiveness leading to more satisfied stakeholders ultimately contributing marvelously towards project success. This actually will open up the ways to research for further development of the generalised mechanism for knowledge sharing through stakeholder inclusiveness. This study tests the relationship between Knowledge Sharing as independent variable and Project Success as a dependant variable mediated by Stakeholder Inclusiveness and Stakeholder Satisfaction in the sequence stated.

### **1.3 Problem Statement**

In this age where timely strategic decisions and actions, according to these decisions, along with the accurately planned synergy guarantee the successful execution of any project, focus of the organisations is shifting towards projects for getting timely and accurate outcomes. This shift has created a dire need of research in the Project Management discipline. One of the main components of project management is knowledge management which allows practitioners to replicate the success by learning from the existing knowledge and not repeating the wrong doings or by planning ahead for any possibilities that might occur during the execution of any given project. This has increased the importance of knowledge sharing among the different stakeholders of the projects.

Although, in recent time it has been noticed and lot of advocacy has been done for stakeholder inclusiveness/engagement for better stakeholder satisfaction leading to the successful completion, not much focus has been pondered on the opportunity of sharing the knowledge through stakeholder inclusiveness. This shortcoming has resulted in utilisation of extra resources and time to acquire the knowledge which was already out there with one/all of stakeholder. The knowledge sharing via stakeholder inclusiveness also leads to better satisfaction level of those stakeholders as they feel sense of importance and can see that their shared knowledge has been addressed in one way or another.

## **1.4 Research Question**

The above stated problems provide the base for the present study which aims to find answers for following questions:

1. How Knowledge sharing impacts on project success?
2. What is stakeholder inclusiveness and does it mediate the relationship between knowledge sharing and project success?
3. What is stakeholder satisfaction and does it mediate the relationship between knowledge sharing and project success?
4. Does stakeholder inclusiveness and stakeholder satisfaction collectively mediate the relationship between knowledge sharing and project success in the stated sequence?

## **1.5 Significance of the study**

The study is planned to investigate the process of knowledge sharing and the impacts of these mechanisms on to the project success. The model is developed to identify the potential contributors in the form of stakeholder towards the

knowledge sharing and the nature of their relationship with the knowledge sharing and the project success.

Equipping organizations and their employees with updated knowledge in today's world is considered as one of the important assets in a competitive world. The study focuses on the said area specific to the research and development projects. It is pertinent to mention that knowledge management plays a vital role in research and innovation based projects. In Pakistan, the behavior related to knowledge sharing has received less attention and this study may help the heads/decision makers of all research oriented project based organizations to draw strategies and interventions for converting the knowledge, owned by different stakeholders, into success factors and improve performance across organizations. It also helps the policy makers to design coping strategies to mitigate the risk of allocating the valued resources and treasured time to acquire the critical knowledge already out there rushing to come out and be utilized. The findings may help the project execution teams to design their activities in such a way that will involve different stakeholders disseminating the knowledge they own in both efficiently and effectively by making it available for the project execution team in order to be more productive during the project lifecycle specially with respect to research based projects.

The study is a first step towards suggesting the need of an integrated model of knowledge sharing, which examines the prospect of stakeholder involvement sufficient to gather critical knowledge leading to stakeholder satisfaction ultimately resulting in a successful project. The study includes variables of knowledge sharing, stakeholder inclusiveness, stakeholder satisfaction and project success. With due support of the theory stakeholder inclusiveness and stakeholder satisfaction are taken as mediators between knowledge sharing and project success.



## 1.6 Research Objectives

The overall objective of this present study is to anticipate and test anticipated model to find out the relationship between knowledge sharing, stakeholder inclusiveness, stakeholder satisfaction and project success. The specific objectives of the study are stated below:

1. To examine the impact of knowledge sharing on project success.
2. To explore the relationship between knowledge sharing and project success mediated by the stakeholder inclusiveness.
3. To determine the relationship between knowledge sharing and project success through the stakeholder satisfaction.
4. To examine the relationship between knowledge sharing and project success while mediated by stakeholder inclusiveness and stakeholder satisfaction.
5. To test empirically and establish the proposed relationships in the research projects of Pakistan.

## 1.7 Supporting theories

### 1.7.1 General Stakeholder Theory

There are two idiosyncratic approaches proposed by General stakeholder theory, known as a management of stakeholders and a management for stakeholders (Freeman, Harrison, Wicks, Parmar, & De Colle, 2010; Freeman, Harrison, & Wicks, 2007). Resource dependency view has provided basis of the stakeholder management approach (Pfeffer & Salancik, 1978 cited in Eskerod, Huemann, & Ringhofer, 2015). In resource dependency view stakeholders are seen as suppliers of resources and can with a free will (Barnard, 1938/1974); in other words, each stakeholder has a right to provide resource or choose to act differently

with its own will. It is critical for an organization to evaluate the stakeholders on the basis of their positive or negative effectiveness (Freeman, 1984; Savage, Nix, Whitehead, & Blair, 1991). It implies that extra care should be taken of the stakeholders with high negative effectiveness or high positive effectiveness. Many stakeholder management theories are based on this instrumental approach (Derry, 2012).

In the management of stakeholders approach it is apparent that managers of the project must discover the ways to inspire the stakeholders, according to the specified objectives, to secure the resources owned or influenced by the stakeholders in favour of the project itself or the management of project (Donaldson & Preston, 1995). The reality, when it comes to management of stakeholders, forces to pay due attention (or at least monitored) to all of the stakeholders because of the continuously changing status of these stakeholders (Savage et al., 1991; Rowley, 1997). Due to its manipulative nature and lack of ethical concerns this approach is has faced some criticism (Donaldson & Preston, 1995; Freeman et al., 2007).

On the other hand, the management for stakeholders approach (Freeman, Harrison, & Wicks, 2007; Freeman et al., 2010) stresses on the principle that its a right of all stakeholders and legal obligation of the management to address all the stakeholders (Julian, Ofori-Dankwa, & Justis, 2008). Eskerod, Huemann, and Ringhofer (2015) maintained the stance of stakeholders being a valuable treasure in their own right and should not be used in favour of the organisation or management of the project with respect to any of the set objectives or aims. By the definition stakeholders in the management for stakeholder are the persons or groups with legitimate interests in procedural and/or substantive aspects of corporate activity, [and] are identified by their interests in the corporation, whether the corporation has any corresponding functional interest in them (Donaldson & Preston, 1995). On the foundation of this definition Eskerod, Huemann, and Ringhofer (2015) has implied that stakeholders should not be treated based on the nature of their effectiveness or similar criterion. This approach also advocates that it would better to sought win-win situations

while organisation has involved the stakeholders. Similar to the case for management of stakeholders approach, management for the stakeholders also has been criticised. The main criticism is that always trying to achieve win-win situation is rather unrealistic in the factual world and it may result in adopting undesired solutions. (Hahn, Figge, Pinkse, & Preuss, 2010).

### 1.7.2 Social Exchange Theory (SET)

Social exchange theory (SET) talks about an exchange between two parties of a valuable resource with expected benefits. Blau (1964) pointed out that this theory advocates that in order to maximise the benefits while reducing the costs will definitely effect the individual actions. The originators of Social Exchange Theory (SET) Homans (1961), Blau (1964) and Thibaut & Kelley (1959) all stated that it is a theory that describes the rational behaviour of the individual to perceive the possibility of rewards that they would gain from the social exchange. And all the stakeholders have their own perception about others and strongly believe in creating others perception needs. Social Exchange theory (SET) has evolved over the years. While revisiting the original concepts of SET it was found that SET depended on belief of individual tendency to share and individuals social value orientation (Cry, & Choo, 2010). Distribution of belongings when it comes to a sharing situation purely depends on the inclinations, likes of norms and attitudes developed through cultural and social upbringing, of an individual. An individual exchange with others leads to maximise profits (could be in any form) at lowered costs. Social Exchange Theory has been categorised into two main types, first being rewarding and second being social relations exchange. Rewards are further hypothesised into four types of money, social approval, self-esteem or respect and compliances (Blau, 1964). In knowledge sharing an exchange takes place (Bock, Zmud, Kim, & Lee, 2005). Anyone involved in knowledge sharing wants a reward in return which could be intrinsic or extrinsic (Kankanhalli, Tan, & Wei, 2005).

Yan, Wang, Chen, and Zhang (2016) stated that intrinsic benefits are based on the feelings of human beings such as pleasure and satisfaction and personal delight is usually the motivational force. On the other hand, extrinsic benefits are usually based on the other human beings such as gifts, punishments, rewards etc. and a combination of both intrinsic and extrinsic benefits influences the knowledge sharing (Yan, Wang, Chen, & Zhang, 2016).

Although knowledge can be classified into many types i.e. explicit, tacit, personal, organisational, and so on (Nonaka, 2007; Teece, 1998; Zack, 1999), but most of the past research discusses two dimensions of tacit and explicit knowledge (Huang, Davison & Gu, 2011). This study will take a summative approach of knowledge sharing in order to measure it.

## **1.8 Structure of Thesis**

Chapter 1 has introduced the comprehensive domain of this study. Along with, it has discussed the background, research gap, research questions, and significance of the study, research objectives, and supporting theories. Chapter 2 has looked into the literature review in detail. Also, the chapter has provided an understanding of the proposed theoretical framework, along with the hypothesis of the study. Chapter 3 discusses the sample and procedures of data collection, the scales that were used to measure the different constructs in this study, and the statistical tests that were used to find the results. The last chapter 4 includes results of the study, discussion of the findings, theoretical and practical implications, study strengths and limitations, and future research directions.

# Chapter 2

## REVIEW OF LITERATURE

The subsequent review of the literature has been indicated within the extensive field of project success. Numerous studies have been studied to ascertain a substantial gap in the literature. Additionally, this chapter contributes to an understanding of the suggested conceptual framework, alongside with the hypothesis development for the present study.

### 2.1 Theoretical Framework

#### 2.1.1 Knowledge Sharing and Project Success

Knowledge is recognized as a mix of facts, skills, ideals and customs that by this definition could be showed in papers, facts, technical news, professionalism and know-how (Koriat & Gelbard, 2014). In projects, a main purpose of administration is logical and structured use of tools for the expansion of fresh knowledge. Projects practice formal and informal approaches to gain valuable practices, information, and know-how to support advance administrative performance which leads to projects success.

Knowledge sharing is a technique in which knowledge suppliers efforts to create knowledge available to other general public (Mooradian et al., 2006). Davenport (1997) acknowledged knowledge sharing like a deliberate procedure, a

procedure in which knowledge supplier willingly shares knowledge in an approach that can be practiced by general public. Currently extremely competitive setting, the most significant action for organizations is to make, practice, and put on knowledge to achieve a justifiable competitive benefit (Yu, Hao, Dong, & Khalifa, 2013). Knowledge managing is important for present organizations because it provides a justifiable managerial development, administrative knowledge, novelty, and success.

Knowledge sharing has been considered as a key effort which is deliberately significant to societies, as it allows general public to receive the essential knowledge from knowledge providers in order to increase their job performance and to advantage the business (Wang & Ko, 2012). Despite of active knowledge sharing, administrations might not participate specialists serious information, expertise and capacities to achieve the difficult and advance work (Zhang, De Pablos, & Zhou, 2013). The knowledge sharing in the projects can enhance the employees performance and improvement abilities that finally clue to project success (Navimipour & Charband, 2016). Team participants share their knowledge when they belief their followers (Chiregi & Navimipour, 2016) and when they feel helpless. Feelings of reliance and belief are affected by the announcement volume, apparent relationship of the projects worth, and the supposed know-how (Park & Lee, 2014).

Knowledge sharing is the furthestmost critical part of knowledge organization (Issa & Haddad, 2008). Knowledge sharing can encourage structural knowledge and ultimately touch the administrative performance (Yang, 2007). This also suggests that administrators in administrations can increase administrative performance by improving the knowledge sharing between employees (Wang et al., 2014). Accepting that the knowledge sharing influence openly defines the total knowledge managing efficiency, an enhancing number of scholars and project leaders are now trying to encourage knowledge sharing performance inside their groups.

Currently, projects have converted more complicated, vibrant and collaborative

conditions (Teerajetgul and Charoenngam, 2006). Project employees in different project managing groups, such as project workers, project managing firms, real estate businesses, and manufacturing corporations and so on want to leading and use vast amounts of knowledge through modern projects. Organizations in the construction industry belong to knowledge-intensive administrations which are extremely reliant on the abilities and knowledge of their specialists and employees, and greatly depend on their teams to put on knowledge in order to distribute service, yields, and produce worth (Arriagada & Alarcn, 2014). Knowledge sharing can extenuate the effect of construction project difficulties (Cooke, 2013), and in order to manage with difficult jobs workers in construction organizations want to share knowledge and know-how inside and among teams (Ribeiro, 2009). Consequently, project managing administrations require to be awake of the rewards of knowledge sharing advantages and carry out (Chen & Mohamed, 2010), and it is significant for project executives to talk and grow suitable approaches of knowledge sharing (Fernie et al., 2003).

As the project managing groups carry out numerous altered projects with diverse project calendars, in diverse situations, the knowledge produced over the struggle to resolution complications on one project can usually be practiced to other remaining projects or upcoming projects (Dulaimi, 2007). Therefore it is even further significant to support the knowledge sharing performance (KSP) between project participants in diverse project groups functioning diverse projects inside the project managing group in order to resolve numerous manufacturing difficulties, escape alike faults, shrink threats and advance work effectiveness. Above discussion leads us to draw following hypothesis:

**H1:** Knowledge Sharing has positive impact on Project Success.

Stanford Research Association in 1960 well-defined stakeholders as those teams except whose help the association would cease to happen (Stoney, & Winstanley, D, 2001). Freeman (1984) later broadened this definition to comprise any team or singular who can disturb, or is affected by, the accomplishment of the organization's purposes.

The Project Management Institute (PMI) describes project stakeholders as those characters and administrations who are dynamically complicated in a project or whose benefits may be exaggerated as a consequence of project implementation or accomplishment. By aggressively connecting persons and teams that are definitely or destructively influenced by a planned project (Andr, Enserink, Connor, & Croal, 2006), the possibility of project success would rise, as the requirements of numerous segments of the general public would be measured before a concluded strategy and resolution is achieved. Stakeholder contribution from side to side the project cycle has consequently been supported by numerous scholars (Li, Ng, & Skitmore, 2012). This forces us to draw the following hypothesis.

**H2:** Knowledge Sharing has significantly positive impact on Stakeholder Inclusiveness.

Knowledge sharing creates the connection among the human capitals further competent, rises the range of knowledge and evidence, enables service of the HR in administrations, and declines client reply period (Navimipour, Navin, Rahmani, & Hosseinzadeh, 2015). Knowledge sharing has been considered like a main attention that is deliberately significant to administrations, as it supports people to receive the essential knowledge from knowledge providers in order to expand their job performance and to advantage the business (Wang & Ko, 2012). Lacking operational knowledge sharing, administrations might not participate specialists serious knowledge, expertise and aptitudes to achieve the compound and improvement work (Zhang, De Pablos, & Zhou, 2013).

Contribution delivers a worthy chance to solve clashes by the meeting of project stakeholders, ranking their anxieties and exploiting their joint contentment (Li, Ng, & Skitmore, 2013). Involved methods in progressive markets typically include the gathering and investigation of stakeholders' sentiments through the project cycle (i.e. the preparation, strategy, creation, action and destruction phases) to support decision-makers create the utmost appropriate explanations to please the comprehensive benefits of people (Campbell, 1998). Stakeholder involvement is prerequisite for a diversity of communal connections to enhance



the probability of project success (Li, Ng, & Skitmore, 2013). However, the participating procedure in certain circumstances is far from acceptable, as it is challenging to balance the various benefits of stakeholders on concerns (Tam & Tong, 2011). Based on above discussion following hypothesis been drawn.

**H3:** Knowledge Sharing has significantly positive impact on Stakeholder Satisfaction.

### **2.1.2 Knowledge Sharing through Stakeholder Inclusiveness for Project Success**

Managers progressively dedicate assets to sustain administrative relations with stakeholders (Porter & Kramer, 2011) and stakeholder managing examination remains to rise in significance. It also raises the validity and recognition of administration strategies and conclusions by making accepting and backing between the stakeholders for the administration actions and therefore donates to a more real implementation of directions and guidelines. Probability of obedience may be improved as well (Haapasaari et al., 2013). It improves the attachment of various stakeholder benefits about the accomplished assets and therefore stakeholder contribution in decision-making procedures, which is a requirement for increasing community well-being and thus establishing the community help from diverse stakeholders (Aanesen et al., 2014).

Project managers and followers are under improved examination by the media, overall community and other stakeholders (e.g., scholars and non-governmental administrations), with demands for more clarity, responsibility and stakeholder contribution in judgment creation (Chappelet & Kbler-Mabbott, 2008). With transparency, responsibility and stakeholder contribution, project managers and members have one option to do it right to accomplish specified main sport occasions generally one-off countryside (Parent, 2008).

Enjolras and Waldahl (2010) openly practiced independent authority in their case study of Norwegian deliberate sport administrations, observing inequitable methods (e.g., lack of dynamic contribution and concerns of demonstration can

weaken managerial lawfulness and thus, debatably, performance. Geeraert, Scheerder, and Bruyninckx (2013) claimed that attaching European football in self-governing values, through improved meta authority, sincerity and stakeholder involvement, should support address footballs increasing complication. The findings reveal that all stakeholder groups enacted democratic governance principles in the context of major sports events, highlighting the importance of building relationships and active engagement overtime, strategic planning, being responsible for ones actions, and providing the right information at the right time. It is also significant to recognize the stakeholder system neighboring the occasion and how it affects the work done by the establishing agency (Parent, 2016). Parent (2008) indicated that the stakeholder network including the internal stakeholders (i.e., Games volunteers and paid staff), as well as a variety of external stakeholders: the media, sponsors, international delegations, sport organizations, host governments, and community (i.e., residents, community groups, activists, schools and local businesses).

A wider stakeholder viewpoint is required; one where the stakeholders describe what each self-governing authority standard comprises, or would comprise. Members well-known stakeholder relations must be constructed from the start, and contain vibrant characters/tasks, responsibility and hopes for all (Parent, 2016). Contribution looked to be a time-dependent practice, rising to comprise more stakeholders as the Games draw close, by constructing relations (outside) and being accountable (inside) (Parent, 2016).

Stakeholder involvement is an essential standard; contribution is a procedure of physical, psychological and sensitive energetic meeting; and outside involvement is roughly the stakeholder relations, a procedure that essentially be scheduled, while interior involvement mentions to a logic of obligation for being involved in the administrations activities (Parent, 2016). Transparency would rationally upset performance confidently if stakeholders attain (or not) the correct evidence at the correct stage (Parent, 2016). The following hypothesis have been drawn based on above discussion:

**H4:** Stakeholder Inclusiveness has significantly positive impact on Project Success.

**H5:** Stakeholder Inclusiveness mediates the relationship between Knowledge Sharing and Project Success.

Stakeholders describe a meaningfully encouraging approach on the way to the application of the new administration actions to raise stakeholder inclusiveness. Stakeholders' satisfaction with their participation relies on the amount to which they are referred and educated about fresh managing methods and on the degree to which they are engaged in the entire procedure of decision-making and execution (Pita et al., 2010). Stakeholders' insights of involvement procedures are prejudiced by their understanding with management connections, for example with respect to how the management has reinforced them and have measured their native benefits (Jentoft & McCay, 1995).

The management of the stakeholder association and the degree, to which the planned managing actions are observed valuable, can affect stakeholders' insights of the excellence of their contribution (Pita et al., 2010; Yandle, 2003). Different circumstances and understandings of involvement in the decision-making procedure may influence the gratification of stakeholder involvement in creating and execution (Msomphora, 2015). The range of stakeholder inclusiveness in the administration and its decision making procedures intensely inspires the level of stakeholder satisfaction (Msomphora, 2015; Coffey, 2005; Salas & Gaertner, 2004).

If the native thoughts are checked, the stakeholders involved are pleased with the procedure. The stakeholders engaged need to be gratified that the procedure assists them and that contribution outcomes in significant decision-making (Msomphora, 2015). Stakeholder satisfaction is essential factors of stakeholder involvement. Stakeholders' satisfaction desires to be improved in order to advance their involvement (Gray, 2005).

On one side, stakeholders who are more pleased with the procedure are also

more probably to contribute. On the other side, stakeholders who have contributed in the procedure are also more probably to be pleased. Usually, stakeholders who are pleased with the decision-making procedure also see themselves to be involved in the procedure (Msomphora, 2015). Growing stakeholders' satisfaction in the managing procedure shows a significant part on the achievement of growing stakeholders' involvement in the decision-making procedure for the improvement and execution (Msomphora, 2015). The following hypothesis has been drawn from above discussion:

**H6:** Stakeholder inclusiveness has a positive relationship with stakeholder satisfaction.

**H7:** Stakeholder Satisfaction has positive impact on Project Success.

### **2.1.3 Knowledge Sharing, Stakeholder Satisfaction and Project Success**

Stakeholder satisfaction can be explained as the accomplishment of stakeholders' pre-project expectations in the real performance of every project phase (Li, Ng, & Skitmore, 2013). The idea of stakeholder satisfaction has increasingly become further significant (Olander, & Landin, 2008). Yang et al., (2011) recommend the usage of stakeholder satisfaction as a standard for calculating project success more over the classic methods of time, cost and quality, and this has achieved extensive help from academe and the business.

Stakeholder theory delivers a solid ground from which to assess the impact of an organization's relations with main stakeholders on its approaches for refining durable performance (James, 2016). Overall, weak relations with key stakeholders can have adverse performance imports for an organization (Choi & Wang, 2009). One method to check the stakeholder satisfaction is by forming an assessment index structure which contains of numerous serious satisfaction aspects (Leung, Ng, & Cheung, 2004). Ahmed and Kangari (1995) recognize six elements leading to customer satisfaction in the construction business, i.e. time, cost, quality, customer coordination, communication abilities and answer

to grievances. Maloney (2002), on the other side, proposes that the valuation of the satisfaction of clients in construction projects must be centered on five standards, i.e. client association, project organization, security, equipped/expert employees and cost. Tang et al., (2003) consider that customers in Hong Kong are gratified when manufacturing companies can show competence; effectiveness; suitability; plan worth; innovativeness; backing for customer; and decent management throughout the project.

Leung, Ng and Cheung (2004) said that the satisfaction of construction project members is selected by management methods despite of the certain project objectives. Nkado and Mbachu (2001) find that customer fulfilment/disappointment is a personal phenomenon that can be established on the customer's awareness rather than on authenticity itself (i.e. transfer of the project inside the time, cost and quality goals). Customers may think disappointed if the project employees flop to perceive belongings from their viewpoint. Stakeholder concept suggests a solid base from which to assess the effect of a organization's relations with important participants on its policies for refining long-standing performance (James, 2016). The stakeholders requirement to be fulfilled that the procedure assistances them and that involvement results in significant decision-making (Msomphora, 2015).

Stakeholder satisfaction is major elements of stakeholder participation (Msomphora, 2015). Participants' satisfaction with their participation base on the degree to which they are referred and up-to-date about new administration processes and on the amount to which they are complicated in the complete practice of decision-making and execution (Pita et al., 2010). Stakeholders' awareness of involvement practices are prejudiced by their knowledge with management connections, for example with respect to how the management has reinforced them and have taken their native benefits (Jentoft & McCay, 1995).

The management of the stakeholder business and the degree, to which the

planned administration methods are observed beneficial, may affect stakeholders' opinions of the value of their contribution (Yandle, 2003). Numerous circumstances and involvements of involvement in the decision-making procedure can affect the satisfaction of stakeholder involvement in expansion and operation (Msomphora, 2015). Commonly, weak relations with major stakeholders may have adverse performance concerns for a project (Hillman & Keim, 2001). Stakeholders' satisfaction wants to be improved in order to raise their involvement (Msomphora, 2015; Gray, 2005). On one side, stakeholders who are more gratified with the development are also more probable to contribute. On the other side, stakeholders who have contributed in the procedure are also more probable to be pleased. Usually, stakeholders who are pleased with the decision-making procedure also assess themselves to be involved in the method (Msomphora, 2015).

Growing stakeholders' satisfaction in the administration procedure shows a vital part on the success of growing stakeholders' contribution in the decision-making procedure for the improvement and execution (Msomphora, 2015). This leads us to have the following hypothesis:

**H8:** Stakeholder Satisfaction mediates the relationship between Knowledge sharing and Project Success.

**H9:** Stakeholder Inclusiveness and Stakeholder Satisfaction both mediates the relationship between Knowledge Sharing and Project Success in stated sequence.

#### **2.1.4 Project Success as dependent variable**

The researchers have been trying from the 1970s to understand the concept of project success and the factors which contribute to the success of the project (Ika, 2009). Though there is no general consensus about its meanings (Judgev & Muller, 2005). As the four decades of research has identified range of success factors which can be applied during the life cycle to increase the chances of projects to be successful, subsequently wide number of success criteria were identified which can be applicable at the completion of the project to analyze

the success of the project (Muller & Judgev, 2012). In spite of this, the success rate is very low and is not up to the perceived expectations (Judgev & Muller, 2012) Basically, the project success is a multifaceted concept. It contains both types of projects i.e. short term and long term projects. In short term, it means the success of management of the project with efficiency and in the long term, it means achieving anticipated outcomes from the projects which mean the effectiveness of the project and its impact (Judgev et al., 2001). According to the Muller and Turner (2007), to get the mutual understanding of the project success it should be defined in terms of measures of success and these criteria should be measurable (Muller & Turner, 2007).

Historically the thoughtful of criteria of project success has been developed from the simple threefold constraint model which is also known as the iron triangle. It includes budget, scope, and time. To some extent, it includes further criteria of success like management of knowledge, quality, and satisfaction of stakeholder (Atkison, 1999; Judgev & Muller, 2005; Judgev & Muller, 2012; Shenhar & Dvir, 2007). Traditionally budget, time, and quality were used to measure the success of the project (Pinto & Selvin, 1987; Mullaly, 2006; Papke-Shields et al., 2010). The project is considered as a successful project when the actual cost is close to the planned budget, the project deadlines meet with the estimated time, and the deliverables meet all the requirements which were established by all the stakeholders.

To measure the project success multiple models were developed by many researchers. The famous and generally accepted are by Pinto and Slevin (1988), Shenhar et al., (2002), Hoegl and Gemuenden, 2001, and Turner and Muller, 2006, these all models were constructed with the various fundamental assumptions. Pinto (1988) established a framework for success which covers the effectiveness of the organization, technical and organizational validity. Freeman and Beales (1992), the framework of success includes the execution, efficiency, performance in terms of technical, organizational implications, managerial implications, productivity, personal development and performance of business.

While the Shenhar et al., (2001) explained the every project have its own requirements and they needed distinct success factors. These factors depend upon the nature of the project and their objectives.

In the same timeframe, the topic of project success becomes popular among the researchers (like Belassi & Tukel, 1996, White & Fortune, 2002). The factors can be grouped into environment-related factors. It means where the project is executed (Fortune & White, 2006; Hyvari, 2006; Jha & Iyer, 2006), factors related to people (Tishler et al., 1996), factors related to the process and tools (Jessen & Andersen, 2000; Khang & Moe, 2008, Shenhar et al., 2002) and the factors related to the context (Sauser et al., 2009). As there is no generally accepted definition of the project context. The Abowd et al., (1999) defined the context of the project as the type of information which can be grouped into the situations of the project i.e. physical characteristics and mental characteristics. The experience of the previous projects great importance including the environment in which project is executed. These two dimensions are under the concept of physical characteristics of the project, while in the mental characteristics contains the social state of the project, emotional situation or the informational situation.

The Shenhr et al., (2001) explains that the project success is not only important for the project life cycle but it also influences the completion of the project and the production as well. The researchers have realized that the risk o project increases due to the absence of the proper structural context and the grouping. Thats why the framework of the success factors was established (Judgev & Muller, 2005).

However, the definition of project success is a challenge in the case of complex projects because these types of projects have long competitive time and projects size is substantially ample (Toor & Ogunlana, 2010; Wang & Huang, 2006). While generally, the researchers have consensus on the two elements to define the project success. The first component is criteria of success and the second one is critical success factor (Muller & Judgev, 2012; Turner & Huang, 2006).



The criteria of success focused on the measures of objectives like fulfilling timelines, scope, and the budget. However, this criterion has got substantial criticism specifically in the case of complex projects. The substantial criticism is because these criteria are overly simplified concepts and they are unable to cope with the experience of and complex projects (Toor & Ogunlana, 2010). An addition to the Judgev and Muller (2005) argued that this criterion has become failed to address the wide range of factors which are considered as indicators of success. While on the other side critical success factors focused on the soft aspects like the behavioral skills of the team, client satisfaction and satisfaction of stakeholders because they provide the real picture of the progressive development of the project success (Judgev & Muller, 2005; Pinto, 1990). While Turner and Zolin (2012) are of the view that the factors of success like budget, time and scope can easily be measured prior to the completion of the project. Moreover, these criteria can be used to measure the progress of long-term and complex projects.

Khan et al., (2013) combined these models on the basis of the literature of last forty years. Basically, it is the superset model of the project success based on the criteria of success identified by prominent researchers. This model has a balance between the hard factors and soft factors and has 25 variables under the distinct dimensions. The model has subsequent dimensions, project efficiency, organizational benefits, project impact, stakeholder satisfaction and future potential.

Mazuer et al., (2014) has focused on the people-related factors for the success of the project. They argued that, firstly, communication should be effective with internal and external stakeholders and secondly unexpected problems and complexities should be managed effectively as they occur during crises. Thirdly there should be clarity of mission of the project and lastly, social support in terms of the top management support is essential (Pinto, 1990). The scholars are of the view that these factors are the key to the project success. Previously both Davis (2014) and Mazuer et al., (2014) distinctively recognized that these

factors are the matchless measures of the project success, substantially in the situation of complex projects.

Chang et al., (2013) have highlighted that in large projects it's very usual that the goals are vaguely defined at the beginning of the long-term projects. While the distinct and special goal leads to the substantial project success. While Mazur et al., (2014) argued that particularly the top management support is the most critical component in the life cycle of a project from the planning to the completion. The organizations face many challenges during the project management and they need to cater the new challenges (Csei-Bryon, 2010). Moreover, the project success is the subjective concept and it depends upon the standpoint of those who measure it (Jha & Iyer, 2006).

Barclay and Osei-Bryson (2010), were of the view that the biggest challenge to the project is the vague and unclear goals and the discrepancy in the expectation of stakeholders. Furthermore, the criteria of success for every project is different, it means it varies from one project to the other project because it depends on the contextual situation and the various perspective of stakeholders (Toor & Ogunlana, 2010). On the basis of this assumption, some researchers like de Vries (2009) and the Chou Yang (2012) have identified that stakeholders have a strong impact. Researchers have no consensus about the criteria of project success (Jha & Iyer, 2006). The reason behind it that there are many factors which have impact on the success of the project like situational factors which are internal to the organization and external factors which mean the environment in which project is executed and they have impact on the outcome of the project and its success (Papke-Shields et al., 2010). Though this concept has been criticized a lot and according to the researchers its and incomplete (Yu et al., 2005). While the researchers have done numerous attempts to fulfill the deficiencies by grouping two distinct approaches. The first is by enriching traditional criteria and secondly, is considering the budget and quality variables of project cost (Yu et al., 2005).

The review of the literature suggested that the project management needs to be focused on the efficiency and effectiveness. Though, Raunair and Rawski

(2012) certify that the failure to deliberately manage the vital projects can limit the competitive progress of the business. That's why due to the complexities of the projects and the absence of the consensus of the researchers, the iron triangle still used as a dominant measure of the success of the project (Pake-Shields, 2010). According to the Agrwal and Rathod (2006), these criteria are still considered as important to evaluate the project success from the professionals point of view and it has been used in many studies sometimes alone and sometimes in combining with other measures. The performance or success of the project can be evaluated according to the planned cost, time and the quality. The quality dimension can be divided into two criteria i.e. fulfilling technical specifications and demands of stakeholders. Projects can be considered successful when it meets the above requirements and partial success can be considered when some of them fulfilled by the project.

## 2.2 Research Model

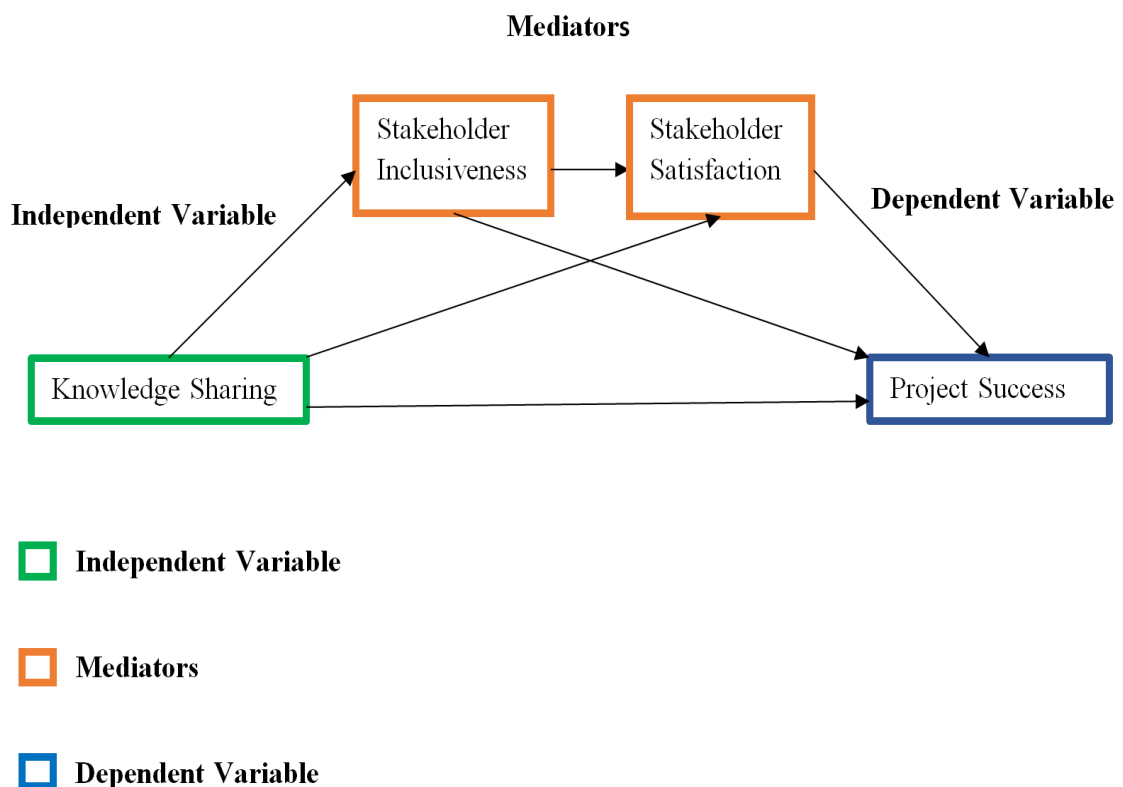


FIGURE 2.1: Research Model

## **2.3 Research Hypothesis**

- H1** Knowledge Sharing has positive impact on Project Success.
- H2** Knowledge Sharing has positive impact on Stakeholder Inclusiveness.
- H3** Knowledge Sharing has positive impact on Stakeholder Satisfaction.
- H4** Stakeholder Inclusiveness has positive impact on Project Success.
- H5** Stakeholder Inclusiveness mediates the relationship between Knowledge Sharing and Project Success.
- H6** Stakeholder inclusiveness has a positive relationship with stakeholder satisfaction.
- H7** Stakeholder Satisfaction has positive impact on Project Success.
- H8** Stakeholder Satisfaction mediates the relationship between Knowledge sharing and Project Success.
- H9** Stakeholder Inclusiveness and Stakeholder Satisfaction both mediates the relationship between Knowledge Sharing and Project Success in stated sequence.

# Chapter 3

## Methodology And Data Discription

### 3.1 Research Methodology

This section aims to provide insights of the practical investigation process for this research. Saunders et al (2007) discuss the research conceptually as layers of an onion whereas other researchers have explained the research process using the metaphor of a tree (Smith, Thorpe, & Jackson, 2015). According to Saunders et al (2007) research process is like peeling off the fundamental layers of an onion while keeping the end objectives in vision. Research logic adopted for this study being the primary layer, research approach being second layer, methodology being third layer, time dimensions being fourth and techniques, tools and procedures adopted for the research process being last layer of the chosen onion. Smith, Thorpe, & Jackson (2015) used roots to represent the research traditions within the specific disciplines along with the lessons learned from past researches and mentioned that as the tree draws the nutrients from the soil, these viewpoints and understandings are drawn up to form the foundations to develop the design, methods and forms of analysis. The cross-section of the trunk of the tree is used to represent the four main characteristics of the research design. Most inner symbolizing the ontology, the basic assumptions made by the researcher about the reality, next ring symbolizing epistemology, the assumptions about the best ways of inquiring into the nature of

world, third ring being methodology, or the way research techniques and methods are grouped together to provide a coherent picture and the fourth ring representing the individual methods and techniques used for data collection and analysis (Smith, Thorpe, & Jackson, 2015). The process for data being collected is also discussed in this chapter.

## **3.2 Research Design**

The general design which shows a scheme of actions following which the identified research question/s are answered is called the research strategy. In other words, it consists on recognition of clear targets and goals separated by the research questions posed along with the identification of information collection sources (Smith, Thorpe, & Jackson, 2015; Saunders et al, 2007).

Deductive method is used for this research and to collect the data, an adapted questioner is used and then connections between dependent, independent variable, and both mediators are observed. Quantitative method is used for enhanced understanding. The questionnaires were given (in some cases filled by researcher) to respondents in the normal daily surroundings of their working environment. The unit of analysis was individual contributing/contributed in any capacity to the different research projects of NARC.

## **3.3 Population and Sampling**

### **3.3.1 Population**

This study mainly focuses on the research projects in Pakistan; the population of the study was all the primary stakeholders of selected (completed/ongoing) research projects. For this very purpose, Pakistani research organization National Agricultural Research Centre (NARC) was contacted to get the required information about their completed/ongoing research projects due to the pure

nature of the research project execution in variety of disciplines where knowledge sharing (especially tacit knowledge) is of an extreme importance. NARC was kind enough to facilitate this research and provided the access to the concerned stakeholders of the selected projects.

### **3.3.2 Sample and Procedures**

The project success criteria differs among different industries specially in terms of research projects that is why to capture the maximum diversity, institutes and departments of Animal Sciences Institute, Agricultural and Biological Engineering Institute, Agriculture Poly Technique Institute, Crop Sciences Institute, Climate Change, Alternate Energy & Water Resources Institute (CAEWRI), Department of Plant & Environmental Protection, Crop Diseases Research Institute, Ecotoxicology Research Institute, National Institute of Bioremediation, Food Science and Product Development Institute, Food Security Research Institute, Horticultural Research Institute, Honeybee Research Institute, Institute of Microbial Culture Collection of Pakistan (IMCCP), Land Resources Research Institute, National Institute of Genomics & Advance Biotechnology (NIGAB), National Institute of Organic Agriculture, Olive Research & Development Institute (OR&DI), Plant Genetic Resources Institute, Rangeland Research Institute, and Social Sciences Research Institute within the NARC Islamabad working on diverse natured research projects were selected.

The current study collected data from the stakeholders of thirty (30) projects of NARC Islamabad. The sample for this study was the stakeholders of the selected projects such as financers, project managers, beneficiaries (potential customers/clients), project execution team members and people working in Project management Unit etc. involved in the selected research projects. Data was collected through a self-administered questionnaire. The questionnaire was distributed deliberately to different types of stakeholders to reach their respective point of view about knowledge sharing, stakeholder inclusiveness, stakeholder satisfaction and project success. In case of illiterate stakeholders (farmers as

beneficiaries etc.) questions were asked in their native language and their responses were translated back into the language of study i.e. English. Total 285 questionnaires fulfilled the criteria to be used for this study from 500 distributed to cover all main stakeholders of those selected projects (Customers i.e. farmers, Research Project executing staff, Research Project Managers and Representatives of financers of the selected projects). The convenience sampling technique was used due to the very nature of study and time limitations.

The study was approved by the Capital University of Science and Technology, Islamabad. The cover letter overtly specifying that the study is conducted for academic research purposes only and is intended for providing a clear understanding of the relationships was attached. Both verbal and written assurance was given to participants about the privacy of their responses and anonymity so that the respondents feel to fill in the questionnaires without hesitation. For this very purpose there was no section to record details of the participants identity.

The completed questioners were collected by the researcher. During the collection of the data, no major event happened in the organization and departments of respondents. More than 500 questionnaires were distributed due to the total population being between 30000 and 40000 taken as best possible guess due to unavailability of accurate data on total number of stakeholders involved in the research projects of NARC Islamabad. The sample size was 381 calculated by sample calculator with 95% confidence level and 5 was the confidence interval. Out of 500 distributed, 285 questionnaires fulfilled the criteria (i.e. filled completely) to be used for this study, the retrieval percentage is 57%. Out of these 285 questioners, the 8% were from Animal Sciences Institute, 11% from Agricultural and Biological Engineering Institute, 3% from Agriculture Poly Technique Institute, 13% from Crop Sciences Institute, 9% from Crop Diseases Research Institute, 1% from Ecotoxicology Research Institute, , 21% from Food Science and Product Development Institute, 2% from Food Security Research Institute, 9% from Horticultural Research Institute, 11% from Honeybee Research Institute, 4% from Land Resources Research Institute, 1% from National



Institute of Organic Agriculture, 6% from Olive Research & Development Institute (OR&DI), 1% from Plant Genetic Resources Institute, none were from other institutes of NARC Islamabad.

TABLE 3.1: Response percentage from Research Institutes

#	Name	Response % age
1	Animal Sciences Institute	8%
2	Agricultural and Biological Engineering Institute	11%
3	Agriculture Poly Technique Institute	3%
4	Crop Sciences Institute	13%
5	Climate Change	None
6	Alternate Energy & Water Resources Institute (CAEWRI)	None
7	Department of Plant & Environmental Protection	None
8	Crop Diseases Research Institute	9%
9	Ecotoxicology Research Institute	1%
10	National Institute of Bioremediation	None
11	Food Science and Product Development Institute	21%
12	Food Security Research Institute	2%
13	Horticultural Research Institute	9%
14	Honeybee Research Institute	11%
15	Institute of Microbial Culture Collection of Pakistan (IMCCP)	None
16	Land Resources Research Institute	4%
17	National Institute of Genomics & Advance Biotechnology (NIGAB)	None
18	National Institute of Organic Agriculture	1%
19	Olive Research & Development Institute (OR&DI)	6%
20	Plant Genetic Resources Institute	1%
21	Rangeland Research Institute	None
22	Social Sciences Research Institute	None

## **3.4 Instrumentation**

The data was collected through adapted questionnaires from different sources. The nature of the items included in the questionnaire was such that all of these could have been filled by any of the stakeholder of the project. Responses for all the items in the questionnaire was recorded using a 5-points Likert-scale where 1 (strongly disagree) to 5 (strongly agree), unless otherwise stated. Questionnaires also consisted of three demographic variables which include information regarding the respondent Age, Qualification, Experience and Role in project.

### **3.4.1 Knowledge Sharing**

A summative 6-item scale from Boch (2005) used by Park, and Lee (2013) to measure knowledge sharing has been used for this research. Questions were likes of We tried to share expertise from education or training in an effective way. Responses were noted on a 5 point Likert scale where 1= strongly disagree and 5=strongly agree. Although there can be a different types of knowledge sharing i.e. explicit or implicit, we have used a general measure of knowledge sharing for this study.

### **3.4.2 Stakeholder Inclusiveness**

A 27-item scale from Association of State and Territorial Solid Waste Management Officials (2011) for measuring stakeholder engagement and partnering efforts was adapted to measure stakeholder inclusiveness. This instrument provides the multidimensional coverage of the aspects of stakeholder engagement/inclusiveness ranging from accessibility to decision-making process, clear understanding of stakeholder interests and concerns, representation of diversity of views, integration of interests and concerns, information exchange, Project efficiency, Decision acceptability, Mutual learning/respect and Cost avoidance, direct and indirect. Responses again were recorded on a 5 point Likert scale

where 1= strongly disagree and 5=strongly agree. Questions were likes of Engagement opportunities are convenient for all participants.

### 3.4.3 Stakeholder Satisfaction

A 10-item scale from Chi and Gursoy (2009) to measure stakeholder satisfaction covering three main dimensions of stakeholder satisfaction including financier satisfaction, customer satisfaction and employee satisfaction was adapted assuming that these three types of stakeholders represent the major portion of the primary stakeholders in the project settings. Responses were noted on a 5 point Likert scale where 1= strongly disagree and 5=strongly agree. One of the questions included for this variable was I am delighted with the way Ive been involved.

### 3.4.4 Project Success

Due to unavailability of one agreed method to measure project success in the project management literature (Aga et al, 2016), and existing difference of opinion on constitution of projects success criteria (Ika, 2009; Joslin and Mller, 2015; Ngacho and Das, 2014; Todorovi et al., 2015), this study has used aggregated measure of project success criteria in line with the approach of prior studies (Bryde, 2008; Khang and Moe, 2008; Mir and Pinnington, 2014; Pinto and Pinto, 1990; Suprpto et al., 2015). Although, to measure the Project Success, different measures likes of 25-item scale from Khan, Turner, & Maqsood (2013), 14-item scale from Aga et al. (2016) and others were available but 25-item scale from Khan, Turner, & Maqsood (2013) was used through the dimensions of Project efficiency, Organizational benefits, Project impact, Future potential and Stakeholder satisfaction. Although stakeholder satisfaction dimension to measure the project success beyond the iron triangle was covered by this measure, a separate instrument (Chi & Gursoy, 2009) was used to measure the mediation role of stakeholder satisfaction for this study. For consistency responses were noted on a 5 point Likert scale where 1= strongly disagree and 5=strongly agree

as described in the definition of the measure itself (Aga et al, 2013). One of the questions included was The project was completed on time.

TABLE 3.2: Summary of the instruments

#	Description of Variable	Items	Source
1	Knowledge Sharing	6	Boch (2005) used by Park, J. G., and Lee, J., (2013)
2	Stakeholder Inclusiveness	27	Association of State and Territorial Solid Waste Management Officials (2011)
3	Stakeholder Satisfaction	10	Chi and Gursoy (2009)
4	Project Success	25	Khan, Turner, & Maqsood (2013)

### 3.5 Descriptive Statistics

The 12.3% respondents had age between 18 years to 24 years, 40% respondents had age between 25-34 years, 36.5% respondents had age between 34-44 years, while 9.8% respondents had age between 45-54 years and 1.4% respondents had age above 55.

TABLE 3.3: Age Frequencies

Ages	Respondent % age
between 18 years to 24 years	12.3%
between 25 years to 34 years	40.0%
between 35 years to 44 years	36.5%
between 45 years to 54 years	9.8%
55 years or above	1.4%

## Age Frequencies

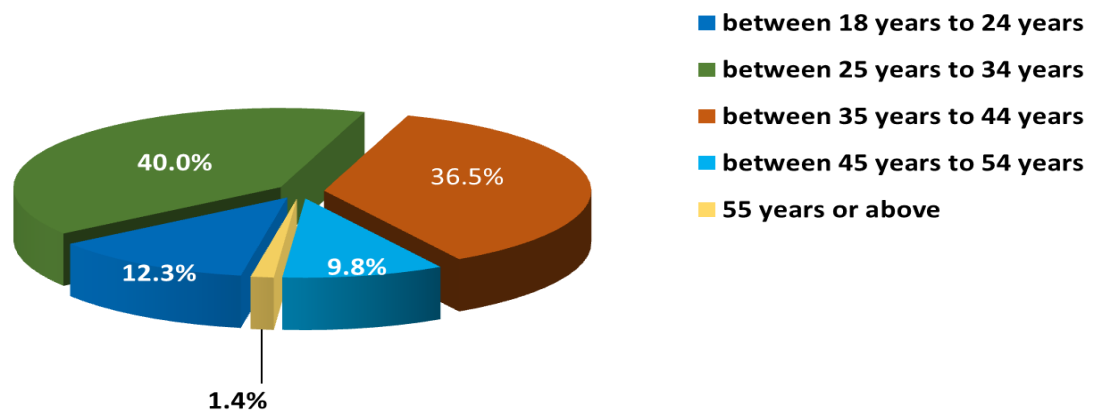


FIGURE 3.1: Age Frequencies

The 29.5% of the participants had a degree equivalent to matriculation or less, 1.1% had a degree equivalent to intermediate, 6.3% held bachelors level degree, 42.8% held a master's level degree, 20.4% held a Ph.D. level degree.

TABLE 3.4: Education of Respondents in Percentage

Education	% age
Matriculation or Less	29.5 %
Intermediate (F.A., F.Sc. etc.)	1.1%
Bachelors	6.3%
Masters	42.8%
Ph.D.	20.4%

The majority 81.7% of the respondents had experience from 4 to 11 years while only 8.1% had experience between 1 to 3 years, 6.7% between 12 and 15 years and only 3.9% had experience of above 15 years.

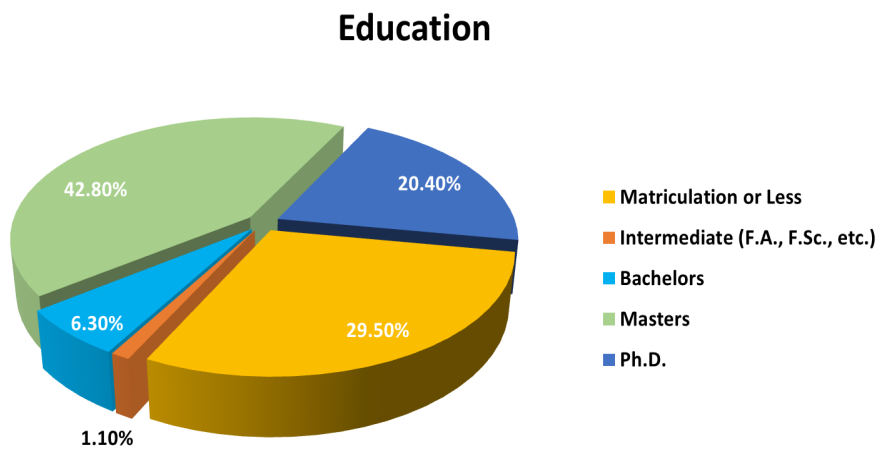


FIGURE 3.2: Education Levels

TABLE 3.5: Experience Levels in Percentage

Experience with Projects	% age
1 - 3 Years	8.1%
4 - 7 Years	38.6%
8 - 11 Years	42.8%
12 - 15 Years	6.7%
Over 15 Years	3.9%

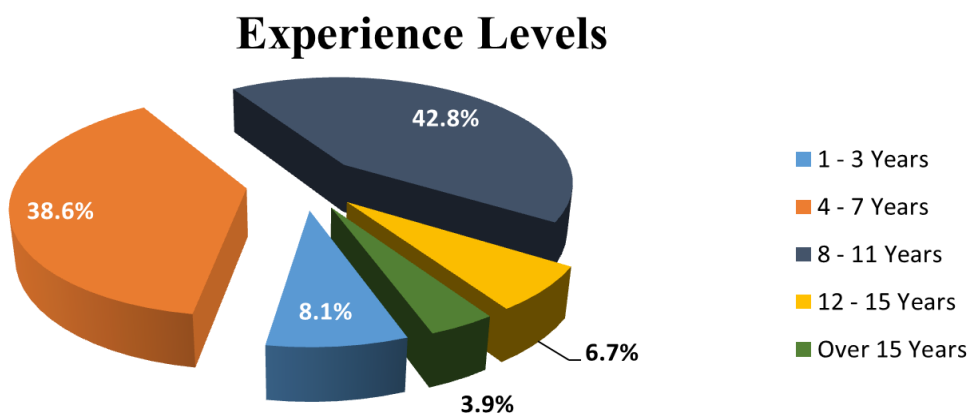


FIGURE 3.3: Experience Levels

The 3% of participants has a role in selected projects as a Sponsor, 55% of participants have a role as a Beneficiary, 2% of participants have a role as Project Management Office staff, 7% of participants have a role as a Project Manager and 33% of participants have a role in selected projects as a Project Execution Team member.

TABLE 3.6: Participants Role in Projects

Role in Project	% age
Sponsors	3.2%
Beneficiary	54.7%
PMO Staff	2.1%
Project Manager	7.0%
Project Execution Team Member	33.0%

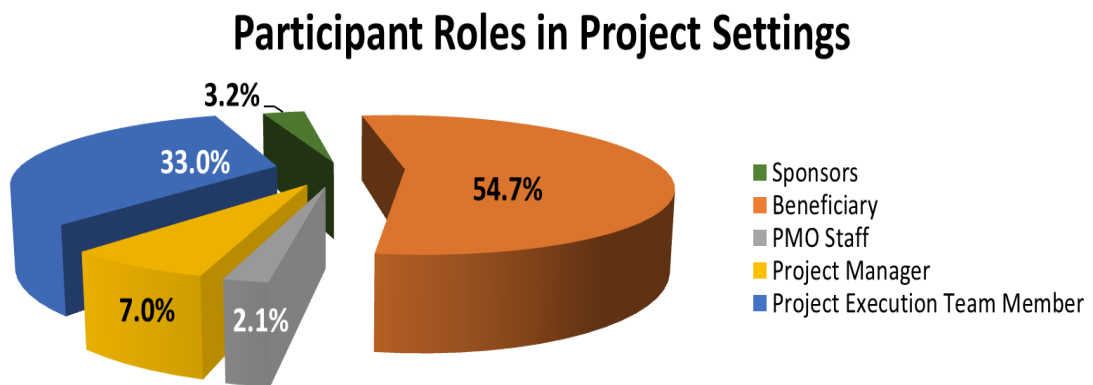


FIGURE 3.4: Participant Roles in Project Settings

In reliability analysis, Chronbachs Alpha is most accurate measure of reliability scale or analysis (Field et al., 2005). It can be seen that from the results that the value of Chronbachs Alpha is greater than 0.6, which is referred as an acceptable range (Van Zyl, Neudecker & Nel, 2000). Single construct wise reliability was checked and for knowledge sharing the reliability was 0.77, stakeholder

inclusiveness and stakeholder satisfaction showed a reliability of 0.83 and 0.90 respectively which is close to 1 and it shows high significance. The data for the variables of Project success a reliability value is 0.69.

TABLE 3.7: Reliabilities

<b>Variables</b>	<b>Items</b>	<b>Cronbach's Alpha</b>
Knowledge Sharing	6	0.77
Stakeholder Inclusiveness	27	0.83
Stakeholder Satisfaction	10	0.90
Project Success	12	0.69



# Chapter 4

## Results And Discussions

Results of this research are stated and elaborated in this chapter. It discusses the correlations, alpha reliabilities along with the results of linear mediated regression analysis for both mediator variables are represented in both narrative form and tabular forms.

### 4.1 Correlation Analysis

Correlation is a measurable strategy in which data is examined via a formula which helps to describe the relationship between selected variables and also determines the nature of the relationship between them. The correlation values are presented in table 5. The results show that Stakeholder Inclusiveness was positively correlated with a value of 0.54 and Stakeholder Satisfaction is also positively correlated with knowledge sharing with 0.36 and Knowledge Sharing is also positively correlated with Project Success with a value of 0.83. Stakeholder Inclusiveness is also positively correlated with Stakeholder Satisfaction with a value of 0.39. Stakeholder Inclusiveness is positively related with Project Success with the value of 0.61 and Stakeholder Satisfaction is positively related with Project Success with value of 0.54. All values are significant at the level of 0.01 (2 tailed). The reliabilities of each construct are shown in parenthesis.

TABLE 4.1: Correlations

		Mean	SD	1	2	3	4	5	6	7	8
1.	AG	2.48	0.88								
2.	ED	3.23	1.54	-0.029							
3.	WE	2.59	0.87	-0.062	0.065						
4.	RL	3.11	1.43	0.046	0.110	-0.250**					
5.	KS	3.79	0.53	0.208**	0.017	-0.018	0.035	(0.77)			
6.	SI	3.52	0.54	0.212**	0.152*	0.017	0.130*	0.541**	(0.83)		
7.	SS	3.99	0.42	0.011	-0.350	-0.007	0.005	0.361**	0.397**	(0.90)	
8.	PS	3.87	0.46	0.141*	0.040	-0.078	0.011	0.837**	0.613**	0.539**	(0.69)

<sup>a</sup> $n = 285$ ;

AG = Age; ED = Education; WE = Work Experience; RL = Role; KS = Knowledge Sharing;

SI=Stakeholder Inclusiveness; SS = Stakeholder Satisfaction; PS = Project Success

The reliabilities are mentioned in parenthesis.

For Age: 1, 18-24 years; 2, 25-34 years; 3, 35-44 years; 4, 45-54 years; 5, 55 and above.

For Education: 1, Matriculation; 2, Intermediate; 3, Bachelor; 4, Masters; 5, MS/MPhil; 5, Ph.D..

For Work Experience: 1, 1-3 years; 2, 4-7 years; 3, 8-11 years; 4, 12-15 years; 5, more than 15

For Role: 1, Sponsors; 2, Beneficiary; 3, PMO Staff; 4, Project Manager; 5, Project Execution Team Member

\* $p < .05$ ; \*\* $p < .01$ ;

The relationship between the variables was analysed by the help of correlation which is a statistical technique through formula it deals with the level of the relationship among variables. It is the measure of linear relationship between variables. The bivariate correlation was analysed, the results were accepted as significant at  $p < 0.01$ . As can be seen in Table 8, the Knowledge Sharing was significantly and positively related to Project Success ( $r = 0.837, p \leq 0.01$ ), Stakeholder Inclusiveness ( $r = 0.541, p \leq 0.01$ ) and with Stakeholder Satisfaction ( $r = 0.361, p \leq 0.01$ ). The first mediator Stakeholder Inclusiveness ( $M_1$ ) is positively correlated with Knowledge Sharing ( $r = 0.541, p \leq 0.01$ ) and can change the face of Project Success ( $r = 0.613, p \leq 0.01$ ). The second mediator Stakeholder Satisfaction ( $M_2$ ) is also positively correlated with Knowledge Sharing ( $r = 0.397, p \leq 0.01$ ) and contributes significantly towards Project Success ( $r = 0.539, p \leq 0.01$ ). Both mediators Stakeholder Inclusiveness ( $M_1$ ) and

Stakeholder Satisfaction ( $M_2$ ) are significantly and positively correlated with project success ( $r = 0.837, p \leq 0.01$ ).

## 4.2 Regression Analysis

To measure the relationship amongst the independent and dependent variable, regression analysis was used. The ordinary least square method was used for the regression analysis. The index for each variable was constructed by outlining diverse enquiries for each variable to use this method. After construction of index, it was used to calculate the average. Regression analysis measures that how much independent variable is positively and significantly linked with dependent variable. Table 9 presents the values of the beta coefficient and R-squared.

TABLE 4.2: Regression Analysis

Predictors	Project Success			
	$\beta$	t	$R^2$	$\Delta R^2$
<b>Step 1</b>				
Control Variables			0.014	
Age	0.139			
Education	0.052			
Experience	-0.077			
Role	-0.020			
<b>Step 2</b>				
Constant				
Age	-0.036			
Education	0.034			
Experience	-0.077			
Role	-0.039			
Knowledge Sharing	0.844	25.559	0.704	0.682***

Table values are standardized beta weights.

<sup>a</sup> $n = 285$ ;

\*\*\* correlation is significant at the 0.000 level

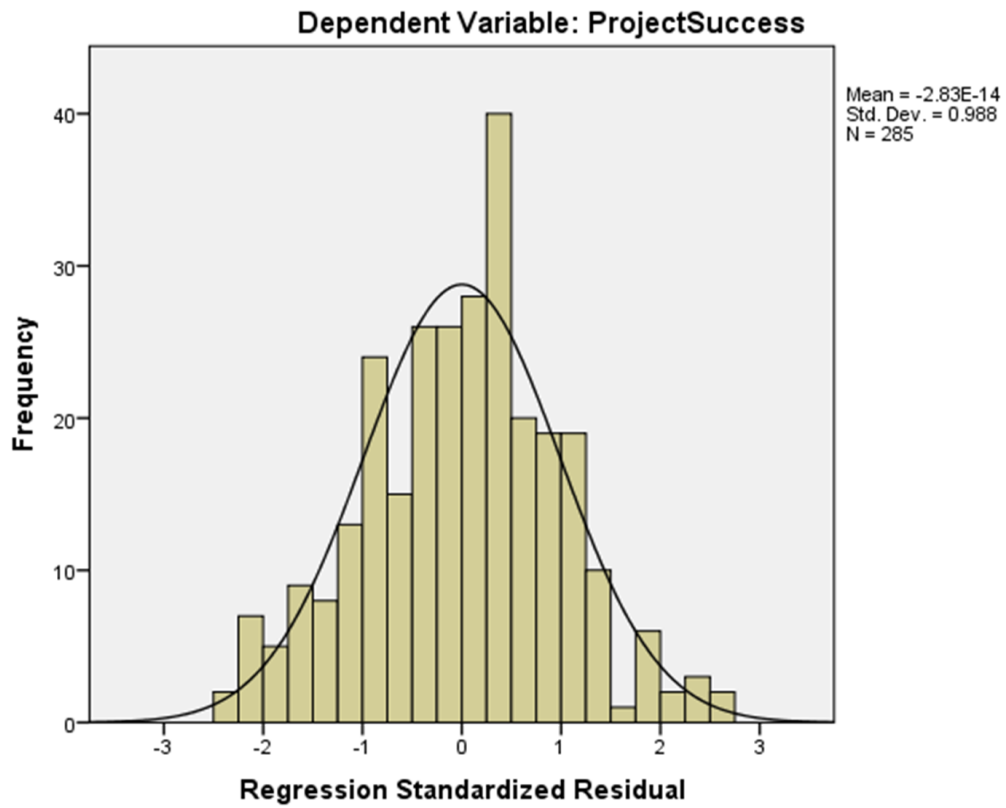


FIGURE 4.1: Histogram

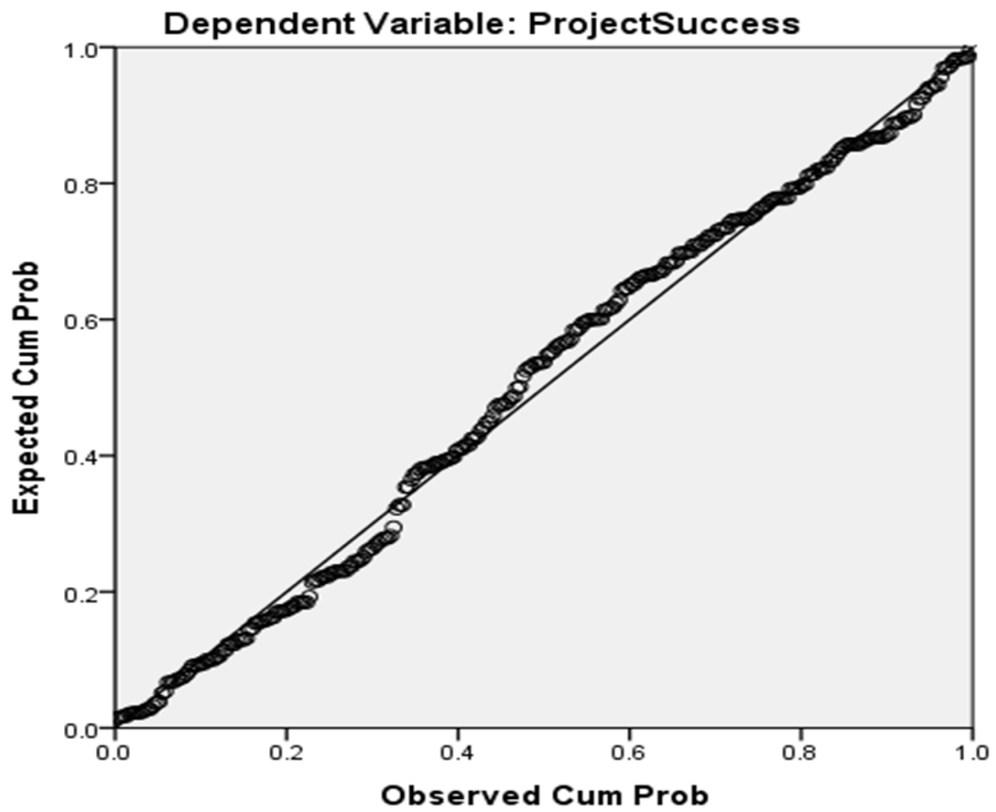


FIGURE 4.2: Normal P-P Plot

The overall model for predicting project success from knowledge sharing was significant ( $F = 135.91, p \leq 0.000$ ). The value of F showed that data collected for this study does not support the null hypothesis i.e. the model used for this study is reinforced by the data and variables in the chosen positions and sequences. The results of regression analysis showed that knowledge sharing was a significant predictor of project success ( $\beta = 0.844, p < 0.000$ ), thus provided support for hypothesis 1 that knowledge sharing would lead to project success. It showed that if the value of knowledge sharing increases by unit 1 then the value of project success will increase by 0.83. The above table 9 showed that value of R-square is 7%, implying that the independent variable is explaining the 7% variations in the dependent variable.

### 4.3 Mediation Analysis

The Preacher and Hayes Analysis was used to run a multiple regression analysis. As recommended in literature by MacKinnon, Lockwood, and Williams (2004) along with Preacher and Hayes (2004) the bootstrap sample of 5000 was used for this multiple regression analysis. The Table 7 and Table 8 show the results of this multiple regression analysis.

Variable X represents Knowledge Sharing that assumes the direction of Project Success which is denoted by Y in the present dissertation. The variable X (KS) is independent variable and is also called the casual variable where as variable Y (PS) is called outcome or dependant variable. Unmediated model is shown in the following diagram:

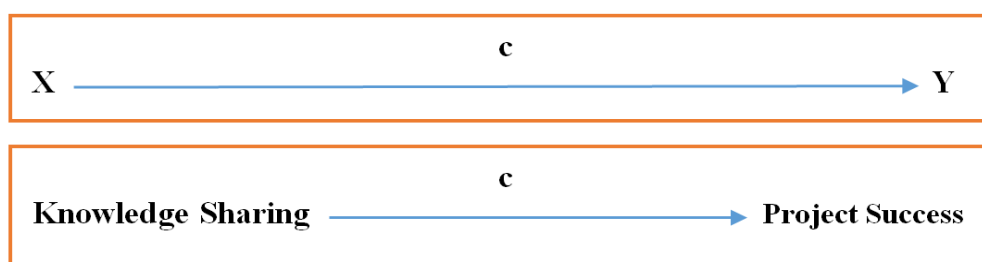


FIGURE 4.3: Unmediated Model

The total effect in above model is shown by path c. The effect of knowledge sharing on project success is mediated by stakeholder inclusiveness and stakeholder satisfaction. In the mediating model independent variable Knowledge Sharing is denoted by X, dependent variable Project Success is denoted by Y, the first mediating variable Stakeholder Inclusiveness is denoted by  $M_1$  and second mediating variable Stakeholder Satisfaction is denoted by  $M_2$ . The mediation takes place in the sequence stated i.e. first by stakeholder inclusiveness  $M_1$  and then by stakeholder satisfaction  $M_2$ .

### Effect of one First Mediator Stakeholder Inclusiveness $M_1$ Only

Figure 4.4 shows the mediating model with only first mediator  $M_1$  i.e. Stakeholder Inclusiveness

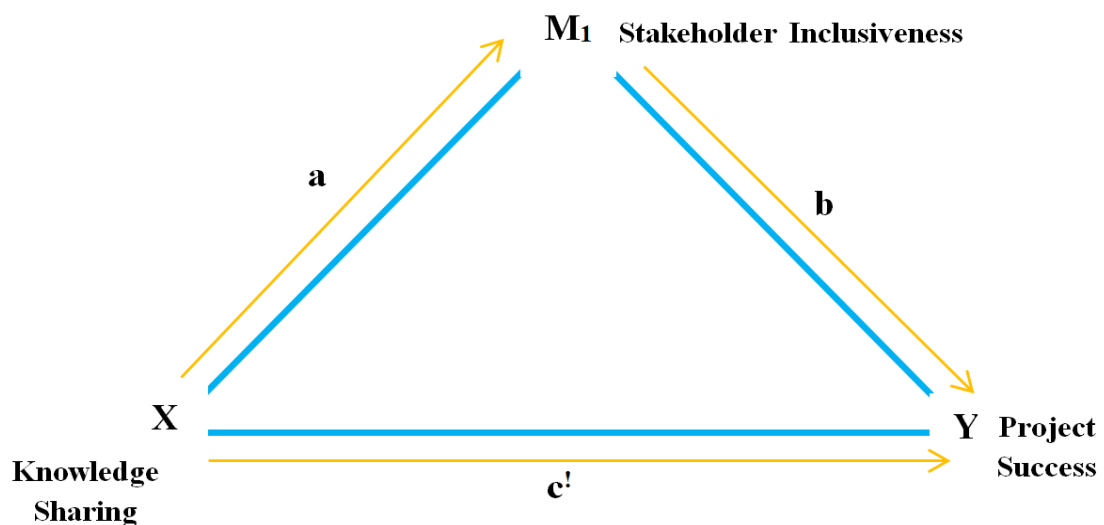


FIGURE 4.4: Mediated Model with one Mediator  $M_1$  (Stakeholder Inclusiveness)

The coefficients of the path a, b, and  $c'$  with only one mediator  $M_1$  are shown in the figure 4.5. The results of mediation test with one mediator of  $M_1$  (Stakeholder Inclusiveness) are shown in Table 4.3.

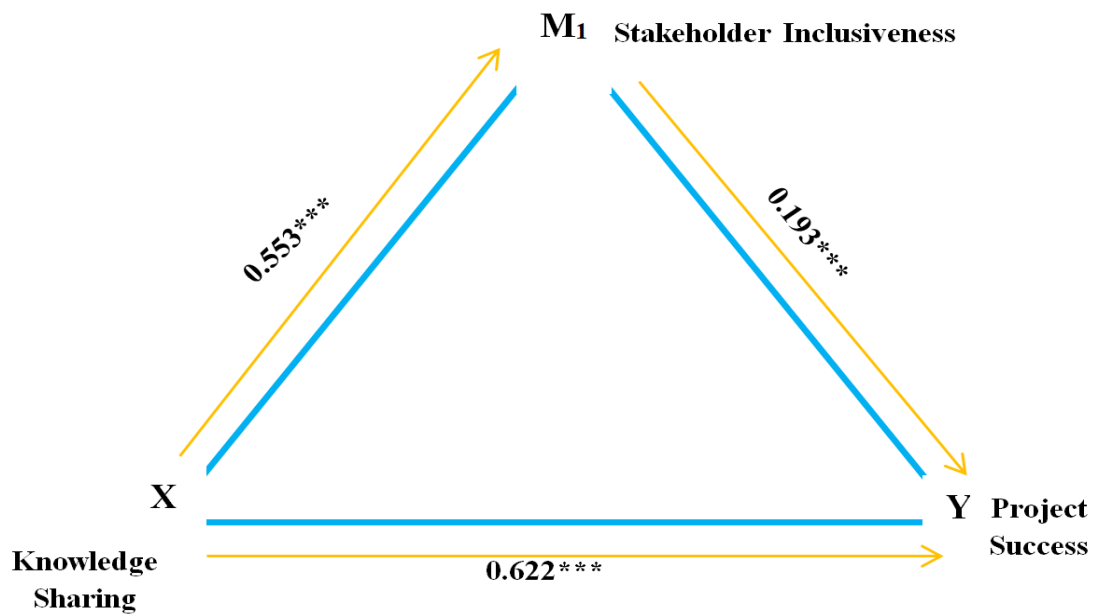


FIGURE 4.5: Coefficients of Mediated Model with only  $M_1$

Table 4.3 shows the mediation results with only stakeholder Inclusiveness  $M_1$  as mediator between Knowledge Sharing and Project Success.

**Meditation Results<sup>a</sup>**

TABLE 4.3: Effects of only Stakeholder Inclusiveness as a mediator ( $M_1$ )

IV	Effect of IV on $M_1$	Effect of $M_1$ on DV	Direct Effect	Total Effect	Bootstrapping result for indirect effects	
					LL 95%	UL 95%
Knowledge Sharing	0.553***	0.193***	0.58***	0.73***	0.061	0.180

IV= Independent variable,  $M_1$  = Mediator, DV= Dependent Variable, LL = Lower Limit, UL = Upper Limit, CI= Confidence Interval.

<sup>a</sup> n = 285;

\*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$ ;

**Effect of one First Mediator Stakeholder Inclusiveness  $M_2$  Only**

Mediating model with only Second mediator Stakeholder Satisfaction ( $M_2$ ) is shown in Figure 4.6.

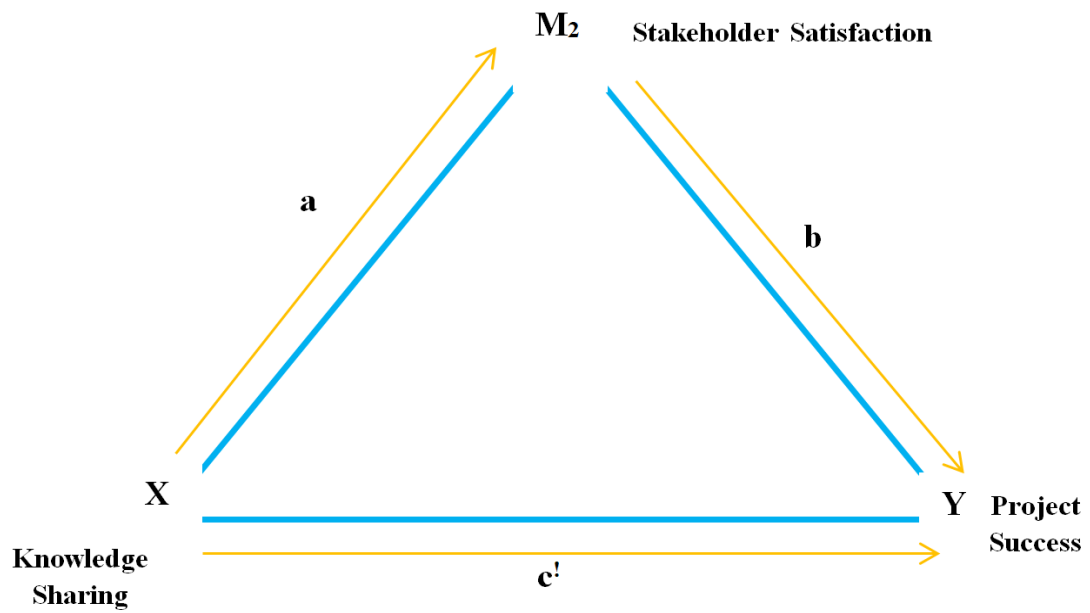


FIGURE 4.6: Mediated Model with only  $M_2$  (Stakeholder Satisfaction)

The coefficients of the path  $a$ ,  $b$ , and  $c'$  with only one mediator  $M_2$  are shown in the figure 4.7. The results of mediation test with only second mediator of  $M_2$  (Stakeholder Satisfaction) are shown in Table 4.4.

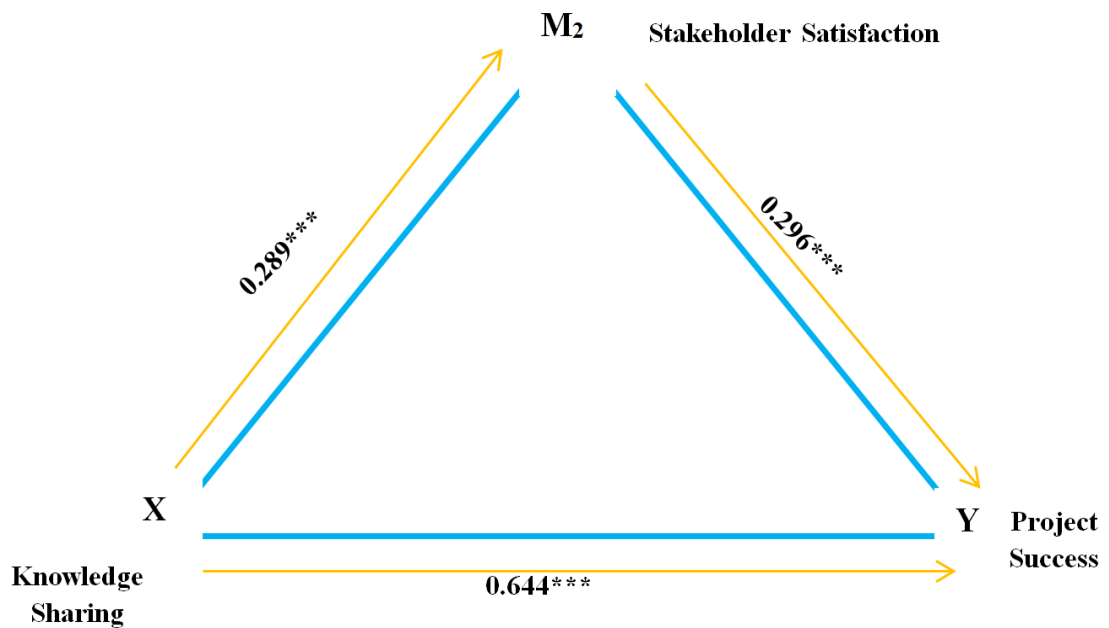


FIGURE 4.7: Coefficients of Mediated Model with only  $M_2$



TABLE 4.4: Effects of only Stakeholder Satisfaction as a mediator ( $M_2$ )

IV	Effect of IV on $M_2$	Effect of $M_2$ on DV	Direct Effect	Total Effect	Bootstrapping result for indirect effects	
					LL 95% CI	UL 95% CI
Knowledge Sharing	0.289***	0.296***	0.644***	0.73***	0.061	0.119

IV= Independent Variable,  $M_2$  = Second Mediator, DV=Dependent Variable, LL = Lower Limit, UL = Upper Limit, CI= Confidence Interval.

<sup>a</sup> n = 285;

\*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$ ;

The mediating model with both mediators  $M_1$  (Stakeholder Inclusiveness) and  $M_2$  (Stakeholder Satisfaction) is shown in the following figure 4.8 below:

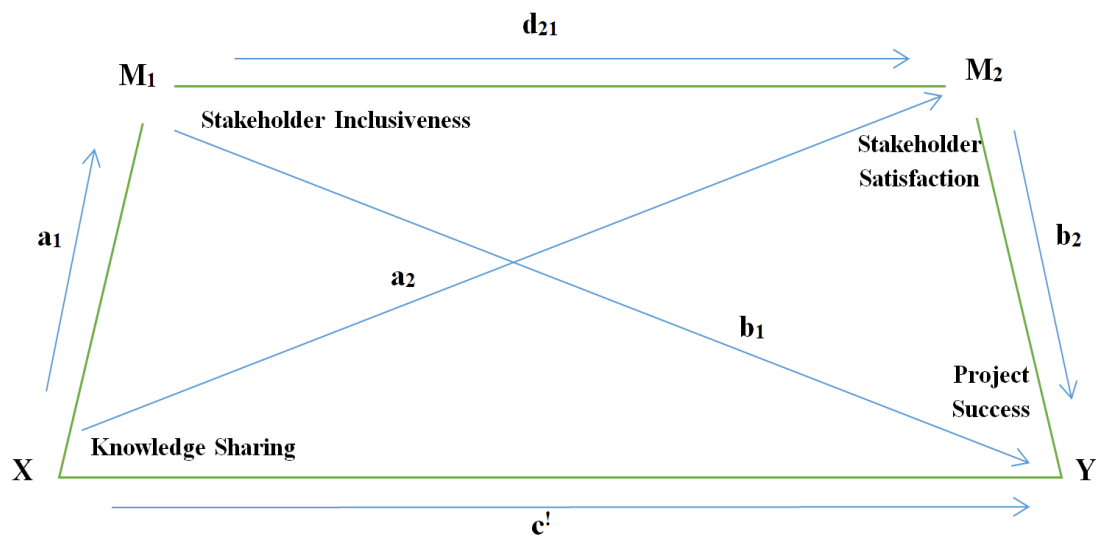


FIGURE 4.8: Mediated Model with both Mediators

The path  $c'$  in above figure showed the indirect effects of knowledge sharing on project success. The coefficients of the path  $a_1$ ,  $a_2$ ,  $b_1$ ,  $b_2$ ,  $d_{21}$ , and  $c'$  are shown in the figure 4.9.

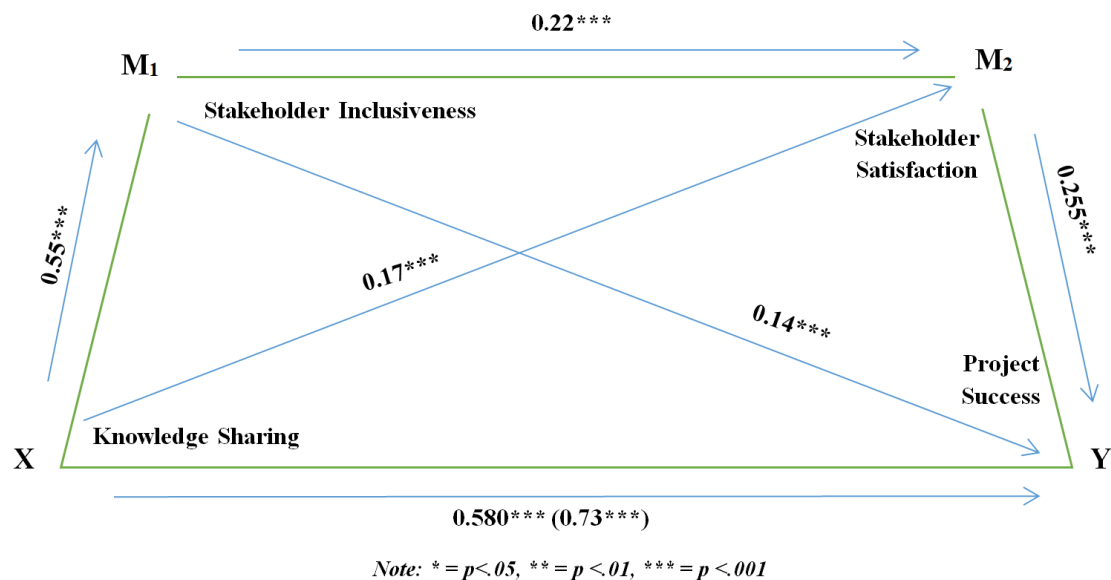


FIGURE 4.9: Coefficients of Mediated Model with both Mediators

The mediational analysis was conducted by using the Process procedure presented by Hayes (2013). To find out about the mediation of single mediator, Model 4 given in documentation for Process procedure (Hayes, 2013) was used i.e. first to test mediation of mediator Stakeholder Inclusiveness ( $M_1$ ) alone between Knowledge Sharing (IV) and Project Success (DV) and secondly to test mediation of only Stakeholder Satisfaction ( $M_2$ ) between Knowledge Sharing (IV) and Project Success (DV). To test the mediation of both mediators Stakeholder Inclusiveness ( $M_1$ ) and Stakeholder Satisfaction ( $M_2$ ) in serial and in stated sequence between Knowledge Sharing (IV) and Project Success (DV) Model 6 provided in Process procedure documentation was used (Hayes, 2013). Bootstrapping is a nonparametric method that generates an estimate of the indirect effect including 95% confidence interval. When zero is not in the confidence interval it means that indirect effect is significantly different from zero at  $p < 0.05$  (two-tailed). The bootstrapping method allows the researcher to avoid shortcomings of the earlier stepwise approach for testing mediation (Hayes, 2008). Furthermore, a better estimate can be drawn with the bootstrapping method because of its resampling with replacement approach.

The figure 4.9 presented the values of path  $a_1, a_2, b_1, b_2, d_{21}, candc'$ , coefficient  $\beta$  value of these paths are, 0.55 significant ( $p < 0.000$ ), 0.17 significant ( $p < 0.000$ ),

0.14 significant ( $p < 0.000$ ), 0.25 significant ( $p < 0.000$ ), 0.22 significant ( $p < 0.000$ ), 0.58 significant ( $p < 0.000$ ) and 0.73 significant ( $p < 0.000$ ) respectively. The Table 4.5 and 4.6, presented direct effect, total effect and bootstrap results for indirect effects. From this, it can be seen that the indirect effect via stakeholder inclusiveness and stakeholder satisfaction on the relation between knowledge sharing and project success fell between 0.1102 and 0.1997. For these results, zero was not present in confidence interval so it means that the stakeholder inclusiveness and stakeholder satisfaction mediates the relationship between knowledge sharing and project success. The direct effect of knowledge sharing is significant ( $p < 0.000$ ) and the coefficient  $\beta$  has been increased (from 0.58 to 0.73) so it means that stakeholder inclusiveness and stakeholder satisfaction partially mediates the relationship between knowledge sharing and project success, so hypothesis was therefore fully supported.

#### **Meditation Results with Process (Model 6)**

Effects of only Stakeholder Inclusiveness ( $M_1$ ) as a mediator between Knowledge Sharing (IV) and Project Success (DV) in presence of second mediator ( $M_2$ ) Stakeholder Satisfaction

TABLE 4.5: Mediation Analysis Results (only  $M_1$  in presence of  $M_2$ )<sup>a</sup>

IV	Effect of IV on $M_1$	Effect of $M_1$ on DV	Direct Effect	Total Effect	Bootstrapping result for indirect effects	
					LL 95% CI	UL 95% CI
Project Success	0.55***	0.14***	0.58***	0.73***	0.1102	0.1997

IV=Independent Variable,  $M_1$  = First Mediator, DV=Dependent Variable, LL = Lower Limit, UL = Upper Limit, CI= Confidence Interval.

<sup>a</sup> n = 285;

\*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$ ;

Effects of both Stakeholder Inclusiveness ( $M_1$ ) and Stakeholder Satisfaction ( $M_2$ ) as mediators between Knowledge Sharing (IV) and Project Success (DV) in serial are shown in Table 4.6.

TABLE 4.6: Mediation Analysis Results (with both mediators  $M_1$  &  $M_2$ )<sup>a</sup>

IV	Effect of IV on $M_1$	Effect of $M_2$ on DV	Effect of $M_1$ to $M_2$	Direct Effect	Total Effect	Bootstrapping result for indirect effects	
						LL 95% CI	UL 95% CI
Project Success	0.17***	0.25***	0.22***	0.58***	0.73***	0.1102	0.1997

IV= Independent Variable,  $M_1$  = First Mediator,  $M_2$  = Second Mediator, DV= Dependent Variable, LL = Lower Limit, UL = Upper Limit,  
CI= Confidence Interval.

<sup>a</sup> n = 285;

\*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$ ;

## 4.4 Summary of Hypothesis Results

TABLE 4.7: Summary of Hypothesis Results

#	Hypothesis Statement	Results
H1	Knowledge Sharing has positive impact on Project Success.	Accepted
H2	Knowledge Sharing has positive impact on Stakeholder Inclusiveness.	Accepted
H3	Knowledge Sharing has positive impact on Stakeholder Satisfaction.	Accepted
H4	Stakeholder Inclusiveness has positive impact on Project Success.	Accepted
H5	Stakeholder Inclusiveness mediates the relationship between Knowledge Sharing and Project Success.	Accepted
H6	Stakeholder inclusiveness has a positive relationship with stakeholder satisfaction.	Accepted
H7	Stakeholder Satisfaction has positive impact on Project Success.	Accepted
H8	Stakeholder Satisfaction mediates the relationship between Knowledge sharing and Project Success.	Accepted
H9	Stakeholder Inclusiveness and Stakeholder Satisfaction both mediates the relationship between Knowledge Sharing and Project Success in stated sequence.	Accepted

# Chapter 5

## Discussion and Conclusion

The following chapter consists on the discussion about results found in earlier section of this study in line with the literature already available. It also explains the implications of this research on the managerial practices along with the academic implications. The chapter discusses the strengths, limitations, and provides few of the recommendations for future research. In the last section of this chapter, conclusion of this research has been presented.

### 5.1 Discussion on Results

The aim of the research was to examine the impact of knowledge sharing on project success by achieving higher level of stakeholder satisfaction earned through the knowledge shared by involving all or most of the stakeholders in the knowledge sharing process. In the terms of conceptual model, this research explored the mediating effect of Stakeholder Inclusiveness and Stakeholder Satisfaction in the stated sequence between the Knowledge Sharing and Project Success in the research oriented project based organisations in Islamabad, Pakistan. The outcome of this research has suggested that there is a noteworthy correlation between the independent variable (Knowledge Sharing) and dependent variable (Project Success) even when partially mediated by the Stakeholder Inclusiveness ( $M_1$ ) and Stakeholder Satisfaction ( $M_2$ ). This study provides the

evidence from the research oriented project based organisation sector of Pakistan and the results can be utilised by the policy makers and practitioners for efficient and effective execution of projects. This research developed 9 hypothesis and all of these were supported by findings through both data and theory.

The developed hypothesis for this study assumed that knowledge sharing has a positive impact on project success. The results of this study are in line with the previous studies (Mueller, 2015). Navimipour and Charband (2016) have mentioned that employees performance can be improved drastically though knowledge sharing in the projects contributing significantly towards the success of the project. Second developed hypothesis for this study assumed that knowledge sharing has positive impact on stakeholder inclusiveness has also been supported by the results of this study and these results are supported by the findings of earlier studies and by the instrumental approach of general stakeholder theory stating that project based organisations can benefit from establishing positive relationships with stakeholders (Donaldson & Preston, 1995; Jones, 1995; Jones & Wicks, 1999). Tesch, Sobol, Klein, and Jiang (2009) pointed out that shared knowledge especially between the two types of stakeholders in project settings known as beneficiary and project execution team can have significant impact on project teams performance and on success. One of the critical components affecting the efficiency of knowledge sharing is the level of the communication among the stakeholders (Grant, 1996). Eskerod, Huemann and Ringhofer (2015) also mentioned that sharing information has positive impact on stakeholder engagement leading to satisfaction of stakeholders further supporting the third hypothesis that knowledge sharing has positive impact on stakeholder satisfaction along with the findings of the current study. Although there is lack of established framework to share the right knowledge in right manner with right people which can pave the way for future research.

Stakeholder Inclusiveness has recently gained the attention from different researchers as a main and critical contributor to project success. Meaningful stakeholder engagement occurs when project management teams decide on instituting relations with stakeholders as a means to manage the impact of any

changes the undertaken projects may cause (Jeffery, 2009). Eskerod, Huemann and Ringhofer (2015) have referred this embracement of an extensive range of stakeholder groups as stakeholder inclusiveness. They also pointed out the frantic need of a revised thinking about the mechanism of managing stakeholders effectively and efficiently due to many different demands on the project (Eskerod & Huemann, 2013; Huemann, Eskerod, & Ringhofer, 2016). Stakeholder inclusiveness is a highly applicable concept when it comes to investigate about the stakeholder satisfaction which can mainly be earned through including stakeholders and this study revealed that by applying stakeholder inclusiveness in a project increases the likelihood for more engaged and satisfied stakeholders giving support to our hypotheses 4 and 6. These results are partially in line with findings of Eskerod, Huemann and Ringhofer (2015) who suggested that stakeholder inclusiveness increases the chances of project success while mentioning the fear of losing site of critical stakeholders or developing unachievable expectations in the minds of stakeholders. These are partially opposite to the findings of this study which advocates for the stakeholder inclusiveness for knowledge sharing and to get more satisfied stakeholders. This conflict could be due to the limitation of Eskerod, Huemann and Ringhofer (2015), as their findings were based on only one project. The organisational and national culture may also have contributed towards the conflicting results. Findings of Msomphora (2015) also support the results of this study by mentioning that stakeholder satisfaction is influenced by the level of stakeholder participation in decision making process.

Hypothesis referring to the mediating role of stakeholder inclusiveness and stakeholder satisfaction between the relationship of knowledge sharing and project success proved to be an extension to the findings of Msomphora (2015) and Eskerod, Huemann and Ringhofer (2015). All three of the hypotheses relating to mediation were accepted with partial mediation because difference was observed in the coefficient values of the  $c$  path and  $c'$  path. This supports General Stakeholder theory which advocated for the management for stakeholders instead of management of stakeholder along with the stances of Social



Exchange theory (SET) which talks about the exchange between different stakeholders in terms of rewards to make best use of resources and reduce the cost that will affect the behaviour of individuals (Blau, 1964).

## **5.2 Implications**

### **5.2.1 Managerial Implications**

The evidence from the current study implied that knowledge sharing has a significant impact on the project success, though, the partial serial mediation of the stakeholder inclusiveness and stakeholder satisfaction is due to different factors impacting on the relationship between knowledge sharing and the project success. This study also has managerial implications, suggesting to the project managers of research oriented projects especially in the context of Pakistan that they must have a fair representation of all types of stakeholders to acquire the critical knowledge which will enrich the graph of stakeholder satisfaction positively resulting in more chances of a successful completion. They also need to look for a comprehensive mechanism for knowledge sharing via stakeholder inclusiveness sharing right knowledge, with right number of stakeholders at right time to right ones.

### **5.2.2 Academic implications**

This present research have opened doors for research contributing towards establishment of a framework for knowledge sharing among different stakeholders through stakeholder inclusiveness creating higher level of stakeholder satisfaction ultimately contributing significantly towards project success.

In the tremendously fast world of today, making timely and correct decisions are far more important and critical because this heavily contributes towards the success of the project. Inability to do that can change the fate of the project within no time. Researchers can use the results of this study as a baseline and

can use the results for comparisons when doing further tests to find out either same effect in different cultural, environmental or population settings.

### **5.3 Strengths, Limitations, and Directions for Future Research**

The current study has strengths and some limitations. One of the strength of this research is that it has explored the new research domain of the project management by providing the insight of stakeholder inclusiveness as mechanism of knowledge sharing contributing towards stakeholder satisfaction and ultimately to project success. Researchers and practitioners both can base their experiments and practices on this study in the pursuit of finding the ultimate framework for knowledge sharing through stakeholder inclusiveness especially when it comes to tacit knowledge.

The research was conducted in the limited timeframe with almost minimal resources. To conduct a research on a broader spectrum of the relationship between knowledge sharing, stakeholder inclusiveness, stakeholder satisfaction and project success much of greater resources and time would be required. Also sampling for this research was done from research oriented projects getting done in Pakistan which may have contributed to the current findings of this study. So in different project settings, nations, domains and cultures different results may be found.

The future study is suggested with the same model among the non-research oriented project based organisations of both public and private sector. This may lead to provide support to the results of this study or may give different insights on the subject. It would also be rewarding if a research can be conducted based on the data collected from different industry projects.

## **5.4 Conclusion**

The aim of the research was to discover the possibility of acquiring and sharing knowledge through such stakeholder inclusiveness which leaves more satisfied stakeholders defining the project as success. In other words it investigated the impact of knowledge sharing on project success with mediating role of both stakeholder inclusiveness and stakeholder satisfaction in the stated sequence. It was concluded that both stakeholder inclusiveness and stakeholder satisfaction partially but significantly mediated the relationship between knowledge sharing and project success in the context of Pakistani research oriented project based organisations.

The research highlighted the fact that stakeholder inclusiveness can be used to share knowledge and a framework for this can be developed. The study suggested to transform the sensitivity of stakeholder inclusiveness i.e. who is critical to include and who to ignore, into managing the level of knowledge sharing with different stakeholders.

The project based organisations especially involved in research and development, need to focus on the valuable knowledge they can acquire through knowledge sharing practices by adopting stakeholder inclusiveness. These organisations should advocate the knowledge sharing culture by engaging maximum possible stakeholders and managing the level of communication among stakeholders without losing sight of critical ones.

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# Appendix

## Questionnaire

Dear Respondent, I am a student of MS Project Management in Capital University of Science and Technology Islamabad. I am conducting a research to find out if knowledge sharing via stakeholder inclusiveness and stakeholder satisfaction leads to more chances of projects being successful. For this, I need your valuable feedback. You are requested to please spare few minutes.

I assure you that this data will remain confidential and will only be used for academic purpose. It will not be shared with anyone. You need not mention your name. Thank you.

Sincerely, Muhammad Irfan Mustafa

Name of the Organisation:.....

### SECTION I (Demographics)

Please tick the appropriate column.

1. Education	1	2	3	4	5
	None	School	College	University	MPhil/PhD

2. Age (years)	1	2	3	4	5
	18 - 24	25 - 34	35 - 44	45 - 54	55 or More

3. Projects Experience (years)	1	2	3	4	5
	1-3	4-7	8-11	12-15	Over 15

4. Role	1	2	3	4	5
	Sponsors	Beneficiary	PMO Staff	PM	PE Team

PMO = Project Management Office, PM = Project Manager, PE Team = Project Execution Team

For the following questions, please tick in appropriate boxes your strength of agreement with the following statements: 1) Strongly Disagree, 2) Disagree, 3) Neutral, 4) Agree and 5) strongly Agree

### SECTION II (Knowledge Sharing)

#	Questions	1	2	3	4	5
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	We shared the minutes of meetings or discussion records in an 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 information to each other in an effective way.					
5	We tried to share expertise from education or training in an effective way.					
6	We always shared experience or know-how from work in a responsive and effective way.					

### SECTION III (Stakeholder Inclusiveness)

#	Questions	1	2	3	4	5
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
	<b>Accessibility to decision-making process</b>					
1	Timing and focus of engagement					
2	Influence on decisions/processes					
3	Access to decision maker					
	<b>Clear understanding of stakeholder interests and concerns</b>					
4	Comprehensive stakeholder assessment completed					
5	Assessment results analyzed and categorized					
6	Strategic stakeholder involvement plan developed and implemented					

7	Changing/emerging interests and concerns identified and plan modified, as needed					
	<b>Diversity of views represented</b>					
8	Participants represent full diversity of interests					
9	Engagement opportunities are convenient for all participants					
	<b>Integration of interests and concerns</b>					
10	Participant interests identified and integrated into issue identification; common interests identified					
11	Participant interests integrated into alternative solutions					
12	Participant interests result in changed actions, reprioritization, and adjustments throughout the project					
	<b>Information Exchange</b>					
13	Documents from all participants are readily available, clearly written, understood, and translated when necessary					
14	Meetings are conducted in a manner and format conducive to open dialogue and free exchange of ideas and viewpoints					
15	Innovative approaches are utilized to share ideas and reach mutually acceptable solutions to complex issues					
	<b>Project efficiency</b>					
16	Engagement and partnering are realistically integrated into overall project planning and budgeting					

17	Projects are completed on time and on budget, with engagement and partnering integral to the decision making process					
18	Partnerships leverage resources and result in general support for outcomes					
	<b>Decision acceptability</b>					
19	Engagement and partnering relationships are established at the issue-identification stage and routinely utilized throughout the project					
20	Alternatives are jointly identified, discussed, and debated					
21	Decisions reflect the goals and interests of all participants					
	<b>Mutual learning/respect</b>					
22	Participants can clearly articulate other participants positions					
23	Participants with diverse viewpoints engage in civil dialogue and debate on issues					
24	Participants are willing to engage in joint problem-solving, compromising to reach mutually acceptable solutions					
	<b>Cost avoidance, direct and indirect</b>					
25	Engagement and partnering are adequately integrated into project planning and budgeting up from					
26	SMEs have realistic workloads to ensure facilitation of quality engagement and partnering					
27	Informational material production time and cost requirements are understood and planned for					

**SECTION IV (Stakeholder Satisfaction)**

#	Questions	1	2	3	4	5
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
	<b>Financer Satisfaction</b>					
1	Achieved the planned profits					
2	Return on investment is justified					
3	Net profit is acceptable					
	<b>Customer Satisfaction</b>					
4	I am very satisfied with my contributions					
5	I am delighted with the way Ive been involved					
6	Management exceeded my expectations					
	<b>Employee Satisfaction</b>					
7	Overall, I am satisfied with my job					
8	I intend to keep working for long on such works in future					
9	I often think about quitting my <i>job</i> <sup>R</sup>					
10	As soon as I can find another job I am going to <i>leave</i> <sup>R</sup>					

**SECTION V (Project Success)**

#	Questions	1	2	3	4	5
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
	<b>Project efficiency</b>					
1	Finished on time					
2	Finished within budget					
3	Minimum number of agreed scope changes					
4	Activities carried out as scheduled					
5	Met planned quality standard					
6	Complied with environmental regulations					
7	Met safety standards					

8	Cost effectiveness of work					
	<b>Organizational benefits</b>					
9	Learned from project					
10	Adhered to defined procedures					
11	End product used as planned					
12	The project satisfies the needs of users					
13	New understanding/Knowledge gained					
	<b>Project impact</b>					
14	Projects impacts on beneficiaries are visible					
15	Project achieved its purpose					
16	End-user satisfaction					
17	Project has good reputation					
	<b>Future potential</b>					
18	Enabling of other project work in future					
19	Motivated for future projects					
20	Improvement in organizational capability.					
21	Resources mobilized and used as planned					
	<b>Stakeholder satisfaction</b>					
22	Sponsor satisfaction					
23	Steering group satisfaction					
24	Met client's requirement					
25	Met organizational objectives					