CAPITAL UNIVERSITY OF SCIENCE AND TECHNOLOGY, ISLAMABAD

The Role of Shared Leadership in Project Performance: Sequential Mediating Mechanism of Psychological Contract and Knowledge Sharing, Project Complexity as Moderator

by

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Dedicated To My Parents

CERTIFICATE OF APPROVAL

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Abstract

The study aimed to investigate how shared leadership affect project performance; through the sequential mediation mechanism of psychological contract and knowledge sharing. Furthermore, the study explored whether the project complexity moderates the positive relationship between shared leadership and psychological contract. Data were collected from 284 individuals working in project-based organizations (Information technology sector) in Rawalpindi/Islamabad. SPSS was used to analyze correlation and regression between variables. The findings showed that shared leadership has a positive impact on project performance. Furthermore, the psychological contract in form of relational and transactional psychological contract and knowledge sharing mediated the positive relationship between shared leadership and project performance. The results did not support the hypothesis that project complexity moderates the relationship between shared leadership and psychological contract (transactional and relational). This thesis has been concluded with a discussion of the practical and theoretical implications along with limitations.

Keywords: Shared Leadership; Psychological Contract (Transactional Psychological Contract and Relational Psychological Contract); Knowledge Sharing; Project Performance; Project Complexity.

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Abbreviations

DV	Dependent Variable
H	Hypothesis
IV	Independent Variable
KS	Knowledge Sharing
LMX	Leadership Member Exchange
Med	Mediator
Mod	Moderator
PC	Project Complexity
PP	Project Performance
RPC	Relational Psychological Contract
SL	Shared Leadership
TPC	Transactional Psychological Contract

Chapter 1

Introduction

1.1 Background of the Study

Many studies have tried to identify the outcomes of various leadership styles (Anser, Ali, Usman, Rana, & Yousaf, 2021). Leadership is a vast and diverse subject of study, and researchers are trying to make sense of it. According to extant research, a single leadership strategy cannot be "one-size-fits-all" and must be tailored to specific situations, settings, and organizations (Singh, Del Giudice, Tarba, & De Bernardi, 2019). There has been a surge in interest in alternative approaches to leadership in recent years, with shared leadership in particular being promoted as a means of enabling team-based organizations to operate effectively in complex business environments (Clarke, 2018). Contrary to the previous practice of leadership, functions of the leadership are shared with the team members in the shared leadership and this approach is being implemented in many flourishing sectors of Pakistan like Information Technology.

Project management and leadership for assessing project performance, time, and cost have historically been the two major triple constraints that have dominated drift (Koops, Bosch-Rekveldt, Coman, Hertogh, & Bakker, 2016). To deal with the various complex and psychologically taxing scenarios and decision-making circumstances that can develop owing to variances in project kind, dimensions, extent, and context, several leadership philosophies are needed. This is because project performance and leadership are closely intertwined (Anantatmula, 2010). Due to

the urgency of the subject, shared leadership is a particularly compelling topic for research (Byrne & Barling, 2015) as well as the reality that the leadership role has become even more essential when projects are vibrant and/or their objectives are unclear (Collyer & Warren, 2009). According to experts in project management research, shared leadership—in which the leadership responsibilities are divided between the group of people-is especially efficient when there is a high level of collaboration among the group members, a need for creativity, and a high degree of project complexity (Huang, 2013). Previous studies show that leadership style has a positive impact on project performance (Adamu, Gara, & Danjuma, 2022). However, surprisingly little research has been done on shared leadership in the field of project management (Scott-Young, Georgy, & Grisinger, 2019).

However, shared leadership appeared as desirable in recent years. It enhances behaviors in employees which strengthens the possibility of desirable outcomes for the organizations. Shared leadership is important as leaders can give teams the opportunity to demonstrate shared leadership by modeling participatory behavior. The team's characteristics determine whether or not shared leadership is achieved (Chiu, Owens, & Tesluk, 2016). Shared leadership has an added influence on the behavior of employees and bosses as well. These behaviors influence the employee and supervisor's relationship also known as a psychological contract. Psychological contracts are mutual beliefs, perceptions, and obligations between the employer and employee. Theoretically, psychological contract research has advanced our knowledge of the employee-employer exchange relationship and its consequences on organizational behavior (Tekleab, Laulié, De Vos, De Jong, & Coyle-Shapiro, 2020). Psychological contract focuses on employees' evaluations of how well the organization has generally adhered to its commitments (Kiefer, Barclay, Conway, & Briner, 2022).

Researchers can now extract new paths or the shapes of the psychological contract. Recently, micro-level variations were studied by (Y. Yang, Griep, & Vantilborgh, 2020) which explains that micro-level changes in workers' perceptions of obligated and provided inducements were the outcome of a proper mechanism that indicates leader-member exchange. Additionally, it revealed that perceptions of obligated and provided inducements predict each other to construct a dynamic system using

daily and weekly repeated assessments. Usually, if the employee and supervisor or manager relationship are positive then they feel trusted and tend to share more information. Psychological contracts can be classified into relational, transactional, transitional, and balanced typologies, depending on the nature of employees' perceived expectations of the organization. This study will focus on the transactional and relational psychological contract.

A transactional psychological contract (TPC) is a brief exchange of specific monetary or economic benefits and contributions. A relational psychological contract (RPC), on the other hand, is a long-term arrangement that does not include any specific performance-reward arrangements (Agarwal, 2018).

Furthermore, employees in an organization, their mutual relationships, and the nature of development contracts can favorably enhance explicit knowledge sharing (Lan, Wang, Hu, & Lei, 2020). The process of spreading diverse materials among persons participating in certain activities is known as knowledge sharing (KS). Knowledge sharing has been observed to have a positive impact on creativity, implementation, and managing projects leading to better performance. Evidence from the extant literature suggests that knowledge sharing and employee performance have a favorable association (Al-Emran, Mezhuyev, Kamaludin, & Shaalan, 2018). It is obvious that teamwork is important: a well-focused project team is proposed as a way to improve project results (Molaei, Bosch-Rekveldt, & Bakker, 2019). Moreover, Project performance is also affected by the change in behaviors of employees and the relationship between employees and manager/ supervisor. Psychological contracts in businesses have an impact on project performance, and there is a link between psychological contracts and employee outcomes (Sandhya & Sulphey, 2020). Though the project performance may improve with increased shared leadership, psychological contract, and knowledge sharing with rapid changes and advancement in the IT sector, projects are getting complex day by day. Knowledge should be accessible to every person related to an enterprise. Knowledge sharing is considered essential detail inside the organization as it's related to a competitive advantage (Hoegl & Schulze, 2005). Knowledge factors that influence a project give it an edge in achieving its performance and lead to the desired success. Knowledge sharing and a positive attitude to learning

improves project outcomes and improve team performance and satisfaction with one's mind, beliefs, and values, which benefits the organizations (Navimipour & Charband, 2016). The behavior of knowledge sharing in the workplace has been described as encouraging and motivating employees. Knowledge sharing is very important in a plan-focused environment, where various individuals collaborate to complete various tasks and accomplish a common objective (W.-T. Wang & Hou, 2015). Projects require exceptional pioneers who comprehend the value of knowledge sharing and know how to effectively tie it. Successful leadership has sparked interest in a variety of research fields, including mentoring (Allen, Eby, Poteet, Lentz, & Lima, 2004).

For decades, complexity has been considered an important factor in the project management literature (A. Shenhar & Holzmann, 2017). Additionally, an increasing amount of research indicates that an essential element of efficient project management is an awareness of project complexity. This is because complex operations are expanding quickly across a range of industries (Luo, He, Jaselskis, & Xie, 2017). The term "project complexity" refers to "many different parts that are interconnected and operational in terms of differentiation and interdependence" Baccarini (1996). Baccarini (1996) definition of complexity applies to any project dimension relevant to the project management process. Organization, technology, decision-making, the workplace, information, and systems are all covered. The level of complexity in project management science is still very low and not very advanced in comparison to other fields of project management knowledge (Makui, Zadeh, Bagherpour, & Jabbarzadeh, 2018). The concept of complexity is also related to the difficulty and interdependence of various parts within a system, according to the literature (Geraldi, 2008).

A complex project can have a variety of characteristics that are related to uncertainty or difficulty, the project's unique nature, communication, and a lack of clarity of information. In addition to the aforementioned characteristics, instability and a high degree of confusion add to the project's complexity. Companies are under tremendous pressure to deliver the desired services due to the complexity of projects (Pickavance, 2008). In project-based organizations, specifically in the information technology sector, the projects come across frequent changes which

makes the project complex. When project complexity increases, more shared leadership is required which positively affects the relationship between the employee and the supervisor, resulting in an increased psychological contract. Due to this, when employees face complexities in the project, they tend to share more knowledge to tackle the problem which results in better project performance.

As per (Stevens, 1996) measures of success are used to assess and analyze project performance. Performance measurement is a method involving reporting and collecting information related to project inputs, efficiency, and effectiveness. Measurement is essential for tracking, forecasting, and able to monitor different factors that are critical to determining achievement (Love & Holt, 2000). It is defined that project performance can be evaluated in various strategic contexts within an organization, such as effectiveness, team spirit, teamwork, immediate progress, willingness to share concepts, as well as future training. A. J. Shenhar and Dvir (2007) explained that various items, such as human resources, financial resources, and material resources, are used appropriately to achieve the desired performance. Proper knowledge is also regarded as a resource for improving performance (Lawler, 2001).

Information sharing is regarded as a crucial part of systems for managing knowledge and has an influence on corporate performance (Alavi & Leidner, 2001). Knowledge sharing facilitates the organizations and the workers to understand and deal with problems with more efficiency (Venkatesh, Davis, & Zhu, 2022). One of the most important tactics for improving project performance and ensuring successful project delivery is to manage project complexity (Luo et al., 2017). Certainly, it can be characterized as "comprising many fluctuating interrelated parts and operationalized in terms of separation and interdependency". Extant literature shows that the stream of positive outcomes somehow can be affected by such influential organizational elements.

1.2 Gap Analysis

The capacity to influence a person or a group of individuals is known as leadership. Previously, shared leadership was researched as a direct influential factor to the outcome variables like project success. It may have an indirect effect that

needs to be investigated, particularly in the field of project management. The present research focuses on project-based organizations, more specifically information technology and the construction sector. The favorable outcomes of shared leadership on project performance, in the form of psychological contracts and information sharing as suggested by (Q. Wu, Cormican, & Chen, 2020), will be discussed in this study. It will also look at how project complexity affects the link between shared leadership and both types of psychological contracts as suggested by (A. Shenhar & Holzmann, 2017).

1.3   Problem Statement

Employees' degree of input is determined by their psychological association with the company. The kind of psychological contract is determined by leadership style, which can be relational or transactional, and has an eternal influence on project performance. Only a few researchers have looked at the underlying explanatory mechanism that explains how shared leadership leads to improved project performance by creating a psychological contract, which ultimately leads to knowledge sharing and, eventually improved project performance, especially in the IT sector. This study will concentrate on these factors along with moderating effect of project complexity. This study is primarily concerned with looking at the impact of shared leadership on psychological contract and information sharing leading to better task execution to directing the impact of undertaking complexity.

There are limited studies on factors affecting project performance as all factors have not been studied thoroughly. This study is conducted on IT sector to determine if there is a good association between shared leadership and the performance of projects. Additionally, it intends to explore how project complexity, psychological contract, and knowledge sharing affect project performance.

1.4   Research Questions

The goal of this study is to find the answers to the following research questions:

Research Question 1

Does shared leadership affect project performance?

Research Question 2

Does sequential mediation of psychological contract and knowledge sharing exist between shared leadership affect project performance?

Research Question 3

Does project complexity moderate the relationship between shared leadership and psychological contract?

1.5   Research Objectives

The research attempts to achieve the following objectives:

1. To explore the relationship between Shared Leadership and Project Performance.

2. To explain the mediatory role of Psychological Contract and Knowledge Sharing between Shared Leadership and Project Performance

3. To examine the moderating role of project complexity between shared leadership and psychological contract.

1.6   Significance of the Study

The current study adds to the literature in a variety of ways. First, the study investigates the effects of shared leadership in the workplace. Second, this study would look into the psychological contract (both relational and transactional) and knowledge sharing as mediators in the relationship between shared leadership and project results. Lastly, the research would also explore how project complexity contributes to their psychological contract and knowledge sharing. It will provide insight to the project-based organizations to techniques for improving project performance considering project complexity. In developing countries, like Pakistan, shared leadership is becoming a topic of interest and is being implemented in very

few organizations now. Thus, the present study would contribute both theoretically and contextually.

1.7 Supporting Theory

1.7.1 Leadership Member Exchange Theory (LMX)

A theoretical framework for analyzing the effects of shared leadership on project performance to fill these gaps, we are drawing on Leadership Member Exchange Theory. The LMX theory, developed by (Graen & Uhl-Bien, 1995), emphasizes the bond that forms between managers and team members. According to the notion, there are three phases in any relationship between managers and subordinates. These are (Contractor, DeChurch, Carson, Carter, & Keegan, 2012), Role-Taking, Role-Making, and "Routinization". Thus, when a supervisor is willing to support and facilitate subordinates, brings role clarity, making things convenient to the followers. Additionally, making them feel valuable, enables them to feel connected with the organization, and ultimately drives them to positive attitudes and behaviors in form of knowledge sharing. This can have an everlasting impact on project performance. Additionally, project complexity in given organizational settings plays a key role in the relationship between shared leadership and project performance.

LMX Theory directly explains shared leadership in many ways and it also affects or even changes employee behavior leading to changes in employee and supervisor relationships. Micro-level changes in workers' perceptions of obligated and provided inducements are the outcome of a proper mechanism that indicates leader-member exchange (Y. Yang et al., 2020). For current study high quality LMX has been considered, indicating positive relationships between the supervisor and the employee. When employees have a better relationship with supervisors, they tend to share more information and eventually better project performance, and if the project gets complex the influence of each factor increases as well. According to LMX, leadership development explains the growth of vertical dyadic workplace

influence and team performance in terms of selection and self-selection. But influential elements like project complexity can reshape the nature of the vertical connection. Such as, the higher the project complexity, the lower will be the impact of shared leadership on the psychological contract. When project complexity increases more shared leadership is required to improve the psychological contract which increases knowledge sharing and results in better project performance.

Chapter 2

Literature Review

2.1 Shared Leadership and Project Performance

Shared leadership, the idea that individuals within a group can share leadership functions, has gained popularity among academics and practitioners alike (Contractor et al., 2012) and (Denis, Langley, & Sergi, 2012). Shared leadership is essentially a group property that results from the dispersion of interaction between leaders and followers among the group's various members of the group (C.-M. Wu & Chen, 2018). Shared leadership differs from formal leadership as its formal leadership comes from the leaders of officially appointed teams and is theoretically based on the idea of vertical interactions between leaders and groups of followers (Liu, Hu, Li, Wang, & Lin, 2014).

Shared leadership stresses leadership style, in which people feel like leaders themselves rather than being led by a single hand (individual to team), and attaining shared project goals. This is the key difference between shared leadership and conventional leadership (Kozlowski & Chao, 2018). DeRue (2011) mentioned the character of shared leadership styles as a part of a discourse on adaptive management. His theoretical view explains that shared group leadership is embedded inside the social technique of leading-following interaction. This indicates that shared management is a social interplay manner that engages every member of the organization to concurrently carry out main and following roles to effectively reap group objectives (Chiu et al., 2016). Instead of a centralized structure in

which one person assumes leadership at all times, the opposite of this is joint leadership, which includes members taking on both leadership and supervisory roles, and at the same time sharing leadership power and responsibility to achieve common goals (C.-M. Wu & Chen, 2018).

Shared leadership is a process of social interaction in which each member of a group interacts, coordinates, and negotiates leadership roles with group members acting simultaneously as leaders. leaders and followers as part of a leadership network within the group. In this approach, leadership is viewed as a complex web of interactions that develops especially in groups engaged in knowledge-intensive work that requires complex decision-making (Scott, Jiang, Wildman, & Griffith, 2018). Researchers who discovered an association between superior project performance and certain forms of distributed leadership structures versus traditional leader-centered structures have dubbed shared leadership distributed leadership or rotating leadership (Mehra, Smith, Dixon, & Robertson, 2006). Traditional leadership forms emphasize and require influence processes within upward and downward hierarchical structures, whereas shared leadership emphasizes peer and lateral influence. Shared leadership techniques are seen as an incarnation of transformational leadership at the corporate level within highly developed teams (Avolio, Jung, Murry, & Sivasbramaniam, 1996) in which employees share their identities as leaders with peers, claiming their leadership roles while also recognizing other team members as leaders. This allows them to lead and follow their peers at the same time (DeRue, 2011).

Limited studies have demonstrated and reported the beneficial impact of shared leadership on project performance when compared to vertical leadership, arguing that it is a strong indicator of project performance (Ensley, Hmieleski, & Pearce, 2006). According to studies, shared leadership generates greater levels of team effectiveness and project performance than historically embraced and exercised hierarchical management structures (Carson, Tesluk, & Marrone, 2007). As essential leadership positions are decided to share, authority differences are lowered, and team members' interactions are strengthened (Pearce & Manz, 2011) as a result, shared leadership seems to be more predictor of project performance than vertical hierarchical management (Ensley et al., 2006). When employees share

leadership, the bond of trust between them strengthens over time to maintain smooth functioning even though trust is a vibrant characteristic of a group with the potential for expansion and advancement (Drescher, Korsgaard, Welpe, Picot, & Wigand, 2014).

Whilst individuals have excessive degrees of understanding and competence to provide the group, the shared leadership's cohesive network structure effectively channelizes their influence on wherein and whilst it's far maximum needed, thereby strengthening the connection between shared management and project performance. Conversely, if a team is low-performing, due to a lack of experienced or qualified members, having a common leadership structure may not improve project performance because team members can easily transfer their responsibilities to others within this framework of interdependence, but their co-workers may not be able to solve the problem or complete the task (Chiu et al., 2016). To meet client needs, projects are divided into smaller parts (with an emphasis on deliverables) and teams are given particular objectives and scopes (Imam & Zaheer, 2021). To reach project goals and maximize members' capability to attain those goals, one must be able to engage and lead by offering guidance and feedback (Pearce, Yoo, & Alavi, 2004). For instance, in IT projects, clients frequently present ideas to the development team and discuss them with them based on their business requirements. Due to their business/market needs, this may alter numerous times. When faced with a circumstance like this, the team members will examine the best way to do the assignment and whether they have the power to decide what, when, and how to do it instead as a group.

Theory suggests that shared leadership can be beneficial to performance, a proposition that has been supported by some empirical studies (C.-J. Wang, Tsai, & Tsai, 2014). Shared leadership evolves curvilinear over time, with the pattern resembling an inverted U-shape. In turn, this pattern of change is associated with improved team performance. It is critical for corporate executives and organizational leaders to recognize that shared leadership can be a powerful determinant of performance among project teams. Keeping this in mind, managers should encourage the formation of self-managed teams (Lorinkova & Bartol, 2021). According to theory, one way for changes in shared leadership to benefit performance is to build

trust among group members. In line with this logic, a recent meta-analysis discovered that shared leadership was positively related to group and organizational performance (C.-J. Wang et al., 2014).

Groups with increased shared leadership, in particular, experience less conflict and greater consensus, as well as higher intragroup trust and cohesion. Based on the existing literature, we can conclude that there is a positive relationship between shared leadership and project performance (Q. Wu et al., 2020). Team members who are granted leadership opportunities tend to cooperate more, offer more resources, and be more devoted to the group (Katz, 1978). Because of the mutual process of influencing in horizontal leadership, which tends to increase team members' respect and confidence and enhance their collaboration, we anticipate finding a favorable connection between both shared leadership and project performance through our study.

Base on above literature, thus it is hypothesized that

Hypothesis 1: Shared Leadership positively affects Project Performance.

2.2 Shared Leadership and Psychological Contract

Psychological contracts describe the formation of employees ' personal perceptions of what they owe to them and the organization (Rousseau, 1989). It refers to both parties in the employment relationship, the organization and the employee, and their perceptions of mutual obligations to each other. These perceptions might be the consequence of formal contracts, or they may be meant to imply each other's expectations, which are communicated in a variety of subtle and not-so-subtle ways. This definition implies that each party may have a different understanding of what these obligations are. Transactional psychological contracts are frequently used in the psychological contract literature to describe limited participation, simple commitments, financial compensation, as well as relationships wherein the personalities of the stakeholders are unrelated (Kaulio, 2018). Subramanian (2017), explained that psychological contract helps leaders understand their own workers'

needs as well as provide orientation with organizational requirements. Pioneers are impacted by a hierarchical focal point and see the psychological contract from this perspective. The remark shows direction with by and large hierarchical methodology and objectives, which is reliable with writing demonstrating that compelling leaders should have this concentration (Daft, 2014).

Despite the importance of the relationship, "no contemporary approach to leadership has explicitly considered using the psychological contract as a framework to fully understand this leader-follower relationship" (Salicru & Chelliah, 2014). As a result, shared leadership improves psychological contracts. The term psychological contract refers to the shared responsibilities and commitments of the representative and the business, as well as a trade connection between two gatherings e.g., employee and employer (Shaheen, Bari, Hameed, & Anwar, 2019). The relational psychological contract is a measurement of psychological contract and it emphasizes deeper engagement in the long run: loyalty as well as concern for the other party (Kaulio, 2018). Contracts for relationships are based on non-monetary benefits that include regard, steadfastness, trust, respect, and loyalty (De Meuse, Bergmann, & Lester, 2001). The organization expects representatives with relationship contracts to devote their entire attention and unwavering commitment to the organization in exchange for competent outcomes. Regarding the relational psychological contract, research from a variety of sources suggests that the relational element of the psychological contract includes ideas that are very commonly associated with the relationship between individual employees and the organizations they work for suggests that it contains (Guzzo & Noonan, 1994). The most common relational elements of psychological contracts include the concept of long-term temporary association (or open timeframes) with an organization and high levels of organizational commitment, loyalty, and trust (Maguire, 2002). Essentially, this type of contract embodies the idea that people care more about the broader aspects of the organization and its stakeholders than about themselves. These ideas are well captured in the following quote, this is taken from an excellent theoretical article on changing the conceptual validity of psychological contracts. "Employees with a relational contract contribute their dedication and involvement to the business enterprise regularly inside the form of organizational

citizenship behaviors, with the perception that the business enterprise will offer loyalty, a sense of community, and opportunities for expert growth. In this relationship, the beneficiaries of the exchange are largely local (i.e. the employee and his or her organizational community). Relational contracting relies on a collective or socialized version of human behavior" (Thompson & Bunderson, 2003).

On the other hand, transactional psychological contracts, are related to the exchange of a chosen financial reward for a smaller arrangement of carefully outlined responsibilities. A psychological contract differs from a social agreement in that its conditional parts include the idea of a confined time connection with an association (or a short period of time), the concept of a psychological contract being related to liabilities, and the relationship with execution-related models as a whole (Chrobot-Mason, 2003). An interesting paper draws attention to those thoughts inside the following quotation, "Organizational inducements within transactional contracts are calculated to satisfy the minimal, narrowly detailed necessities to receive one's financial rewards. Because personnel is involved approximately themselves because the number one beneficiaries of the exchange, transactional contracts suggest an egoistic or instrumental version of human nature" (Thompson & Bunderson, 2003).

There is surely evidence to indicate that the transactional nature of psychological contracts in the workplace has a profound impact on career development and job satisfaction perceptions in a wide range of areas. As per the consequences of a British Workplace Employee Relations Survey, expanding levels of adaptable working, especially contracting out, have brought about lower levels of occupation fulfillment, trust, responsibility, inspiration, and execution. For instance, an examination of 'Changing examples of vocation improvement in the UK found that the conditional idea of business urged UK directors to embrace a stronger and 'variable' way to deal with professional conduct. It was shown that an organization is responsible for career development (Suliman & Iles, 2000). Several kinds of research have proven positive correlations between leadership and psychological contracts (Megheirkouni, 2022). A psychological contract requires a link between faculty and their leaders (Tosunoglu & Ekmekci, 2016). It might be a characteristic assumption, but we do know that how managers rank their employees impact job satisfaction, sense of identity, fairness, and commitment to

work (Cassar, Bezzina, & Buttigieg, 2017). Similarly, it has been argued that researchers are not paying attention to developing a need to adapt leadership styles (McDermott, Conway, Rousseau, & Flood, 2013). Similarly, successful psychological contracts and powerful hierarchical staffing strategies rely on how well leaders "walk and talk." Therefore, both associations and their leaders have an extraordinary responsibility when it comes to improving their workplaces.

In accordance with the literature, leaders who foster positive psychological states and supportive environments foster employee creativity (X. Zhang & Bartol, 2010). Shared leadership fosters an ethical climate within an organization, resulting in greater transparency and a closer relationship between leaders and followers, which in turn promotes self-development for followers (Semedo, Coelho, & Ribeiro, 2017). It is observed that sharing character in leaders draws workers to believe in them (Javed, Rawwas, Khandai, Shahid, & Tayyeb, 2018). The conditional agreement should be viewed as a start-up test before a detailed agreement is drafted. The purpose of spot arrangements is to reduce the possibility of an agreement breaking. Social agreements are selected when faculty and the endeavor agree that long-term and mutually beneficial participation is valuable to both.

Since associations can encourage an improvement culture in which representatives advance their professions and have a good sense of safety, workers are bound to shape a social agreement there (Rousseau & McLean Parks, 1993). Shared leadership takes into consideration each employee's development needs and strengths in order to strategically position them (May, Gilson, & Harter, 2004). Such leadership treats employees with respect rather than simply guiding them as a means to an end, especially in terms of organizational performance and productivity. Shared leadership can strengthen Employee self-esteem and confidence property level; extent of sharing; team member development and growth; employee ambitions and alignment with organizational goals (Zhu, 2008).

Thus, the psychological contract has a favorable relationship to sharing knowledge.

Hypothesis 2 A: Shared Leadership positively affects Transactional Psychological Contract.

Hypothesis 2 B: Shared Leadership positively affects Relational Psychological Contract.

2.3 Psychological Contract has a Positive Effect on Knowledge Sharing

Knowledge may be described as a mixture of revel in, values, contextual records, and professional perception that help examine and include new revel in and records (Gammelgaard & Ritter, 2003). Knowledge resides in documents and repositories and is embedded in people's minds over time Shown through their actions and actions. The knowledge management process includes several activities. The most discussed activity is knowledge transfer (Ford & Chan, 2003). The sharing of information occurs when people, groups, authorities, and associations exchange information. This exchange might or might not be targeted, but still, it usually lacks a clear a priori goal. Individuals or groups must collaborate with others to share knowledge and achieve mutual benefits in order for knowledge transfer to occur (Gupta, Agarwal, Samaria, Sarda, & Bucha, 2012). Through connecting with others and providing unsaid and explicit information, the individual improves their ability to frame what is happening and practice their insight to act and ultimately resolve the issue (Nonaka, Von Krogh, & Voelpel, 2006).

Transactional psychological characteristics involve employment opportunities including very limited responsibilities and/or leadership roles with such a restricted or limited interval, and employees experiencing this type of Psychological Contract may also be looking for different employment opportunities while specific terms fail or do not appear to be appropriately accomplished. In the absence of sales, the company's efficiency is lowered to only those behaviors that correspond to the efforts undertaken (O'Neill & Adya, 2007). Knowledge is a completely vital and useful resource for maintaining valuable heritage, getting to know new techniques, fixing problems, developing core competencies, and starting up new situations (Liao & Chen, 2018). When it comes to achieving success, 'Knowledge' is a widely accepted concept among both organizations and individuals. In an organizational context, knowledge can be defined as the possession of information, ideas, and expertise directly applicable to carrying out various tasks by independent organizational employees (Pereira, Mellahi, Temouri, Patnaik, & Roohanifar, 2018).

Diversity of knowledge serves as the basis for creativity in an organization. However, employees need to actively share their knowledge with others (Liao & Chen, 2018). Employees who are psychologically contract-conscious can induce behavior of the individual and spread knowledge. Psychological contracts also motivate employees to share knowledge, which is an important factor that makes it possible to share knowledge. Previous studies of psychological contracts have concluded that it mediates the interaction between shared leadership and sharing of knowledge (Han, Chiang, & Chang, 2014). The most successful organizations attract and retain talented people by signing psychological contracts with them and motivating them to start generating and sharing knowledge in return for professional development and growth (Thite, 2004). The increased adoption of distributed working environments by COVID-19, as well as the increasing utilization of mobile technology to enable information sharing and decision-making, speed up such changes (Duan, Wibowo, & Deng, 2020).

As a result, respectively organizations and individuals are beginning to feel the tremendous as well as far influence that all these modifications have brought not only on the magnitude, connection directly, and accessibility of knowledge, as well as how information is conveyed, wherever it originally came frm, and also what specific role individuals perform in establishing, transferring, and sharing of knowledge (Kwahk & Park, 2016; Swanson, Kim, Lee, Yang, & Lee, 2020; Lepore, Dubbini, Micozzi, & Spigarelli, 2022). The relational psychological contract involves the exchange of personal considerations, social-emotional and value as well as monetary factors (Rousseau, 1990). Coyle-Shapiro and Kessler (1998) Argued that employees who focused on relational commitments to their employers performed better than employees who used transactional commitments. The elements of the relationship revolve around trust, loyalty, and reciprocity, and these elements evolve over time (Lester, Kickul, & Bergmann, 2007). Trust, an important element of psychological contracts strongly influences employee attitudes and behaviors (Renzl, 2008).

In contrast to knowledge-sharing research, which emphasizes the collective nature of knowledge that results from interactions and dialogue between individuals (Cabrera & Cabrera, 2002). Knowledge sharing is a delicate system and it appears

unreasonable that people make a contribution to their knowledge, effort, and time, while they could without difficulty free-experience what others have contributed (Renzl, 2008). Knowledge sharing in organizations performs a large function in a hit organization management, from an information administration perspective, information sharing is the most difficult technique to manipulate because of the "sticky" nature of the information that results in a slow, expensive and unsure switch of information (Abdullah, Hamzah, Arshad, Isa, & Ghani, 2011). Employees' perceptions of the relevant elements of a psychological contract influence their potential behaviors towards the entire organization, including sharing knowledge (Imam & Zaheer, 2021).

Thus, the psychological contract has a favorable relationship to sharing knowledge.

Hypothesis 3A: Transactional Psychological Contract positively affects Knowledge Sharing.

Hypothesis 3B: Relational Psychological Contract positively affects Knowledge Sharing.

2.4 Knowledge Sharing has a Positive Effect on Project Performance

Knowledge transfer, according to researchers, refers to the application of existing knowledge from one individual to another; knowledge sharing is a general concept than the transfer of knowledge because it includes interconnections, absorptions, and discovery of the latest happenings that are assumed to flow in opposite paths and take place among two or more different people (Boh, 2007). Sharing knowledge within a team has been shown to improve project performance (Srivastava, Bartol, & Locke, 2006). Leaders who play the knowledge builder role create opportunities and approaches that encourage and inspire knowledge sharing among group members. Leaders, for example, initiate meetings and evaluations that, by definition, result in group knowledge sharing by offering innovative thoughts, demanding technological solutions, and progressing relative strategies to work.

Knowledge sharing may be very vital in project-primarily based totally organizations (Pektaş & Pultar, 2006). Without effective knowledge sharing, projects can suffer from unusual problems like coordination issues, failed integrations, etc. So, sharing knowledge on projects can be challenging and difficult work (Sethi, Smith, & Park, 2001). Team members have been shown to be reluctant to share knowledge. This is because sharing can give you an advantage over other members and sharing can undermine its potential value (Ipe, 2003). Sharing knowledge with your team improves project performance for three reasons: better decision-making, better problem-solving, and increased creativity. More knowledge sharing allows the employee to take into account more choices, take lessons from others' experiences, and apply their information more effectively within the team, resulting in better decision-making and project performance.

Knowledge sharing helps solve problems by better understanding the problem at hand, spotting potential problems earlier, and considering more diverse alternatives to the problem (Lee, Gillespie, Mann, & Wearing, 2010). Knowledge sharing is especially important for project-based organizations. It makes it easier for you to work on a project because the individuals working on the project are united in a team and plan / implement the project in a synergistic way using individual skills and expertise (Raziq, Ahmad, Iqbal, Ikramullah, & David, 2020). The flow of information and technical expertise among people for the achievement of specified responsibilities in organizations is referred to as knowledge sharing (An, Deng, Chao, & Bai, 2014; Swanson et al., 2020; Stachová, Stacho, Cagáňová, & Stareček, 2020).

It connects people by transferring knowledge that people have in the delivery of specific products and services in organizations. Furthermore, employees in an organization, their mutual relationships, and the nature of development contracts can favorably enhance explicit knowledge sharing (Lan et al., 2020). The process of spreading diverse materials among persons participating in certain activities is called sharing of knowledge. Sharing knowledge has a positive impact on creating, implementing, and managing projects leading to better performance. Evidence from the extant literature suggests that knowledge sharing and employee performance have a favorable association (Al-Emran et al., 2018). This promotes greater

employee productivity for employees and competitive benefits for businesses by improving staff participation, facilitating wiser decision-making, reducing knowledge retention, and stimulating creativity (Kwahk & Park, 2016; Razmerita, Kirchner, & Nielsen, 2016; Nguyen, Malik, & Sharma, 2021).

Enterprises have therefore been actively researching various methods for encouraging information sharing in order to improve both the effectiveness of individuals and the competitiveness of organizations (An et al., 2014; Malik, Froese, & Sharma, 2020). According to this viewpoint, Employees' lack of willingness or incapability to "share knowledge with co-workers threatens the fundamental interests of an organization" (Bavik, Tang, Shao, & Lam, 2018). For instance, The Institute of Project Management stated that in today's business environment, "the standard methods of scope, duration, and expenditure are extremely important and yet no longer adequate. The effectiveness of an organization is influenced by knowledge sharing, which is regarded as essential to information monitoring systems (Alavi & Leidner, 2001). Knowledge should be accessible to every person related to an enterprise. Knowledge sharing is considered essential detail inside the organization because it is connected to an individual's thoughts, opinions, and moral standards, and organizations are able to achieve a competitive edge (Hoegl & Schulze, 2005). An advantage in achieving performance and success is provided by knowledge-based project-influencing elements. Knowledge sharing and a positive educational mindset improve project results as well as team performance and satisfaction (Navimipour & Charband, 2016). The behavior of knowledge sharing in the workplace has been described as encouraging and motivating employees. Sharing knowledge is absolutely critical in a project-based environment, in which different groups of people work collaboratively to carry out various tasks and accomplish a single objective (W.-T. Wang & Hou, 2015).

Knowledge sharing has proven to be an important requirement for project performance (Pangil & Chan, 2014). Knowledge sharing has been demonstrated to improve project performance in the context of international organizations (Gibson, Dunlop, & Cordery, 2019). Sharing knowledge effectively has a favorable effect on the performance of the projects.

Hypothesis 4: Knowledge Sharing positively affects Project Performance.

2.5 The Relationship between Shared Leadership and Project Performance is Mediated by the Psychological Contract

The relationship between an organization and its employees is primarily based on the psychological contracts they have agreed to and signed together (Liao & Chen, 2018). Psychological contracts are an important factor in determining the effort employees spend on their work (Landry, Vandenberghe, & Ayed, 2014) Employees have a psychological contractual belief regarding the nature of the exchange contract between the employee and the organization (Rousseau, 1989). Transactional psychological contracts are based on economic and social exchanges such as payments, rewards, and promotions (Robinson, Kraatz, & Rousseau, 1994). Under-fulfillment perspectives (i.e., Psychological Contract) have an adverse influence on several essential behavior and attitudes (Agarwal, 2018).

Researchers contends that one cannot determine the type of psychological contract that is working essentially by looking at the individual's business status and recommends, for example, that some temporary specialists can be extremely committed to the organization and see areas of strength for a Psychological Contract, while some everyday laborers and veteran representatives may see only a limited responsibility between themselves and the association. At various stages or times, different team members lead the team, resulting in shifts or changes to the shared leadership paradigm (Carson et al., 2007). There are numerous advantages to shared leadership, which is frequently promoted as a powerful way to boost creativity at the individual and team levels in organizations (He et al., 2020). Transactional psychological contracts can be seen as a moderator of the relationship between injured emotions and burnout, and this relationship becomes stronger when transactional psychological contracts are at a high level. When employees realize that an organization has failed to fulfill its psychological contract, it creates feelings of anger, distrust, and betrayal, which are trust, loyalty, commitment, and long-term relationships (Jamil, Raja, & Darr, 2013). When an employee perceives a negative imbalance with his or her expectations in terms of

social exchange theory, the organization may have the following negative reactions such as reduced trust, loyalty, and commitment to the organization. As a result, one of the most important factors in developing a high-quality LMX is trust, and employees with high trading contracts are more likely to degrade the quality of the LMX (Graen & Uhl-Bien, 1995). Relational psychological contracts are usually observed when long-term contracts are considered to exist that do not include certain contingencies related to performance fees. Rather, we see a beneficial relationship among groups with unlimited consensus, including both socio-emotional and economic aspects (Hui, Lee, & Rousseau, 2004). Psychological contracts thus convey the impact of shared leadership on Project Performance. If an organization can give the impression that leadership functions are divided among its employees, it leads to better performance of the employees, which has a positive impact on project performance. Therefore, based on these studies, the following hypotheses are proposed.

The transfer of specific financial or economic benefits and contributions over a brief period of time is known as a transactional psychology contract (TPC). In contrast, a relational psychological contract (RPC) is a continuing arrangement that does not include any specific performance-reward arrangements (Agarwal, 2018). It is obvious that teamwork is important: a well-focused project team is proposed as a way to improve project results (Molaei et al., 2019). Moreover, Project performance is also affected by the change in behaviors of employees and the relationship between employees and manager/ supervisor. Psychological contracts in businesses have an impact on project performance, and there is a link between psychological contracts and employee outcomes (Sandhya & Sulphey, 2020).

Though the project performance may improve with increased shared leadership, psychological contract, and knowledge sharing with rapid changes and advancement in the IT sector, projects are getting complex day by day. Project performance depends on many factors, including complexity, contracts, relationships with stakeholders involved, the competence of the project manager, and the skills and capabilities of the project team members. As per (Stevens, 1996), Measures of success are used to assess and analyze project performance. Performance measurement is a method involving reporting and collecting information related to

project inputs, efficiency, and effectiveness.

Tracking, predicting, and assessing factors that are essential to improved project performance require measurement (Love & Holt, 2000). It is defined that the performance of a project can be evaluated in various strategic domains within an organization, such as effectiveness, teamwork, immediate success, willingness to share concepts, and future training (A. J. Shenhar & Dvir, 2007). Various assets are utilized suitably to accomplish the ideal presentation e.g., HR, monetary assets, material assets, and so forth. The great information is likewise viewed as one of the assets for further developing execution (Lawler, 2001). Supportive leadership has aroused interest in a variety of research fields, along with mentoring. (Allen et al., 2004). The theory states that shared leadership could really enhance efficiency, which is endorsed by certain empirical studies (C.-J. Wang et al., 2014).

Hypothesis 5 A: Transactional Psychological contract mediates the relationship between Shared Leadership and Project Performance.

Hypothesis 5 B: Relational Psychological contract mediates the relationship between Shared Leadership and Project Performance.

2.6 The Relationship between Shared Leadership and Project Performance is Mediated by Knowledge Sharing

Knowledge sharing is the "exchange or transmission of information between two or more people i.e., communication or information exchange between sender and receiver (Jones III, 2017). By practicing the knowledge builder role, leaders create possibilities and approaches that stimulate and inspire knowledge sharing among group members. For example, by providing new ideas, challenging technical solutions, and stimulating new strategies to work, leaders instigate group discussions and evaluations which, by their very nature, result in group knowledge sharing. They are placing the example and signaling that the open sharing of thoughts and information is essential and precious for the team. As an end result of this

role modeling, team participants are probably to reciprocate and share their information and know-how with the team and it's going to end in better project performance (Lee et al., 2010). Knowledge sharing is a key knowledge management strategy that has been researched at both the organizational stage (Ferraris, Santoro, Bresciani, & Carayannis, 2018) and the individual stage (Chen, Nunes, Ragsdell, & An, 2018).

At an individual level, information sharing has been described as the diploma to which personnel shares their received knowledge with different people within the organization (Teh & Yong, 2011). It includes both express knowledge, which may be prepared and deposited inside the form of official documents, and tacit knowledge, which is hard to materialize (Shah, Eardley, & Wood-Harper, 2007). Staff members cannot be effective if they do not impart their knowledge to others that is even more crucial now that people are leaving for a competitor (Ma, Qi, & Wang, 2008) and as a consequence take some of the valuable information with them (Curado, Oliveira, Maçada, & Nodari, 2017). The organization's knowledge base considerably enhances the ability of its workforce to produce superior project outcomes.

When it comes to initiatives to increase performance, knowledge-sharing techniques are thought to be responsible for the progressive relationship between leadership and project knowledge as a result of the company investment in knowledge management (Lin, Chang, & Tsai, 2016). Project managers need to collaborate with members from different departments to gain new insights, methods, and inventions. This knowledge must be used to solve problems and work more efficiently and effectively to make better performance of projects and project managers can actually use this knowledge in practice (Navimipour & Charband, 2016). People share information through face-to-face communication and networking using technology and other networks, and these processes have a hugely optimistic impact on the extent to which information is shared, group members of the project stay together unless the project or work is done and a social structure is used because knowledge sharing is stopped (Wickramasinghe & Widyaratne, 2012).

Previous studies have supported a positive relationship between shared leadership and knowledge sharing (Yeşil & Dereli, 2013). Employees reward past kind

acts that they find likely to be mutually beneficial or useful in improving their knowledge in the future, thanks to these actions, employees are motivated to have the intention of sharing knowledge with each other (Hsu & Lin, 2008). Based on the previous section, we believe that shared leadership actually has a positive effect on the sharing of knowledge through other psychological factors. Previous research on project management generally described achieving individual project goals using integrated project methods and tools (Turner, 2010). Employees who experience a greater sense of leadership sharing about their goals in the workplace may share more knowledge. Knowledge sharing is associated with increased effort and performance (Liao & Chen, 2018). For example, if employees feel shared leadership, they usually expect to be involved in decision-making and share information. As a result, they find meaning and interest in their work, which influences the associated shared leadership goals.

Project performance with respect to schedules, costs, quality, and stakeholder requirements can be achieved by sharing knowledge and working with team members (Suppiah & Sandhu, 2011). Knowledge sharing is a prerequisite for Project performance. Every project has a source of knowledge, such as team members and project success (Park & Lee, 2014). Adopt new ways to improve your current knowledge, participating in the creation of new knowledge can have a significant impact on the arena of employees in the context of the organization in which they work (Bankins, Griep, & Hansen, 2020). About sharing knowledge, before going to work opinion is taken into account, and the interview questions should demonstrate experience demonstrating transferable capabilities that want to help facilitate knowledge sharing (Mohammed & Dumville, 2001).

A measure to empirically investigate knowledge sharing with other variables is very useful for researchers. For example, one item on a scale asked the individual how worthwhile it was to share knowledge with others and then provided a behavioral example to express their opinion about ratings (Bankins et al., 2020). In order to carry out a project to increase employee motivation, and increase their creativity, four aspects such as knowledge sharing, motivation, procedural fairness, and promotion are considered important factors most important to any organization (Tsai, Horng, Liu, & Hu, 2015). Employees must put in more effort, focus

more, and share as much knowledge as possible to build a knowledge network that can enhance their creativity and reduce the risk of failure and uncertainty (Handy, Gardner, & Davy, 2020). Additionally, it helps employees become more accustomed to their workplaces, which promotes knowledge sharing between old workers and new hires. These activities foster trust among staff members and raise the likelihood that a newcomer to the culture would feel deserving because the knowledge is learned. When you share with him, he responds by becoming eager to learn more and feeling the need to reciprocate (Tsai et al., 2015). (Immediate managers are regarded as the organization's spokesmen who speak on its behalf. Project leaders have a significant impact on how project participants direct their efforts, perform, and pursue goals through what they pay attention to, measure, and control.

As a result, the project leader's position is essential for ensuring that employee expectations and organizational goals are aligned (Lopes, Sbragia, & Qualharini, 2016). Earlier research on project management generally discussed achievements of individual project goals by using consolidated project techniques and tools (Turner, 2010). The current study is aiming at organizational learning as the vital driving force in making a project successful in project-based organizations. An organization must be able to implement projects successfully (Reich, 2007). Knowledge sharing amongst projects reduces the costs of repeating struggles for similar problem-solving in an organization (Boh, 2007). The organization's knowledge base considerably enhances the ability of its staff to produce superior project outcomes.

In the sense that attempts for higher project performance are the outcome of the businesses' funding in knowledge management, knowledge-sharing methods are thought to be responsible for the cumulative link between leadership and knowledge (Lin et al., 2016). Hence, shared leadership and employees ' knowledge-sharing behavior have a strong effect on the project's performance because individual knowledge is both tacit and explicit (Saenz, Aramburu, & Blanco, 2012).

Based on above literature it is hypothesized that;

Hypothesis 6: Knowledge Sharing mediates the relationship between Shared Leadership and Project Performance.

2.7 Psychological Contract and then Knowledge Sharing Mediate the Relationship between Shared Leadership and Project Performance

When leaders in a team with different needs and expertise work together to transform a unit of work into a set of achievable goals and objectives, individual contributors also participate and management supports the goals of the project (Bubshait & Farooq, 1999). Previous studies have also shown that psychological contracts trigger knowledge sharing (Tseng & Lee, 2014) and shared leadership (Donate & Guadamillas, 2011). Due to adjustment to the psychological contract, workers could assume that some components associated with the psychological contract are at risk (Jiang et al., 2022). Measures that do not take place provide possibilities for future conceptual and project processes (O'Neill & Adya, 2007).

One of the most noted factors of leadership that contribute to knowledge sharing in faculties is the style of the leader (Leithwood, Jantzi, & Steinbach, 1999). Leaders enhance their style over a time period because of experience, education, and training. Over the years, researchers have attempted to explain how leadership style and behavior are related to effectiveness (Dessler & Starke, 2004). Shared leadership has been established as a powerful leadership style in leading schools (Leithwood et al., 1999), having been proven to have a significant impact on subordinates' behavior and organizational performance (Tickle, Brownlee, & Nailon, 2005). Shared leadership guides followers in achieving set goals by describing goals, roles, and task requirements (Armandi, Oppedisano, & Sherman, 2003).

Nonaka et al. (2006) outlines four main modes—tacit and express knowledge interact—through which corporations produce and disseminate new knowledge: Able to share one's personal experiences with other people is the process of socialization, which results in the development of tacit knowledge in the form of a conceptual model and technical abilities. Tacit expertise is shared amongst people via modeling and mentoring, conversation, place of work culture, and shared experiences. Externalization transforms tacit knowledge into explicit concepts. Businesses accomplish this through the use of symbolism, similarities, conceptual frameworks,

or designs. This category includes knowledge generated in formal educational universities and colleges and Master's degree courses. Externalization is a process between individuals within a group (Navid & Abbas, 2009).

Chen et al. (2018) tested the relationship between leadership behaviors and information exchange in expert provider corporations in Taiwan and the United States. The outcomes confirmed transformational leadership behaviors as a tremendous predictor of inner knowledge sharing, and Contingent praise leadership behaviors are substantially and definitely correlated with each inner and outside knowledge sharing. Previous studies have found that sharing knowledge is an important aspect of organizational effectiveness, and leaders play an important role in facilitating information sharing within their teams (Srivastava et al., 2006).

Shared leadership contributes to knowledge sharing by first sharing their knowledge. In other words, it supports knowledge sharing across teams. And the coaching of leadership also includes teaching their team members how to communicate effectively with each other, encouraging them to solve problems together, and giving them opportunities to share knowledge (Arnold, Arad, Rhoades, & Drasgow, 2000). Under shared leadership, team members are likely to view themselves as crucial decision-makers and feel more compelled to contribute their expertise. Information sharing in an organisation is a knowledge-sharing strategy that produces new information, either implicitly or overtly (Van Den Hooff & De Ridder, 2004).

There is an argument to be made for the existence of knowledge donation and knowledge collection as dimensions of experience and understanding operations. Knowledge donation is the process of disseminating information by encouraging human interaction. In contrast, knowledge collection is defined as the process of obtaining know-how from various people through discussion, encouragement, and an invitation to various people to share the information that they possess (Van Den Hooff & De Ridder, 2004).

Sharing knowledge is essential for effectively interpreting knowledge acquisition into organizational skills define by (Frey & Oberholzer-Gee, 1997). However, (Lam & Lambermont-Ford, 2010) warns that sharing knowledge is tough because it is dependent on the person's desire to share it. According to (Bass, 1985) explained

(Yukl & Becker, 2006). Shared leadership aims to motivate subordinates to perform work that exceeds organizational expectations. Therefore, (Yukl & Becker, 2006). States that shared leadership employs the following methods to encourage their own employees:

1. Raise employee consciousness of the significance of the outcome.

2. Motivate staff to prioritize the Group's advantages.

3. Identifies higher-level employee needs such as pride and self-actualization.

A strong emotional relationship among leaders and subordinates permits employer owners to use knowledge development to encourage personnel to take part in the employer's improvement. Emotional connection is the underlying reason personnel is inclined to share knowledge (Kambey & Wuryaningrat, 2016). Organizations can improve knowledge sharing if they properly promote knowledge sharing through appropriate means. In particular, tacit knowledge is considered one of the resources of an organization and is difficult to imitate, so it can be a major source of competitive advantage (Tidd, 2006). Leadership has been described as "a process whereby an individual influences a group of individuals to achieve a common goal" (Northouse'a, n.d.). With this definition of leadership, it is stated clearly that anyone in a group can use it; it is not the sole domain of formally designated leaders.

Massive international organizations with such an elevated topographical dispersion heavily rely on fruitful knowledge sharing between employees, teams, and departments. Knowledge sharing has a strong correlation with project performance (Niedergassel & Leker, 2011). Leadership will be shared as needed to promote knowledge, task abilities, and abilities of effective function for the project team (Bergman, Rentsch, Small, Davenport, & Bergman, 2012). When a number of people join a group leadership role with the goal of influencing and directing other members to maximize group effectiveness, this is referred to as shared leadership.

Thus, it is hypothesized that;

Hypothesis 7A: The relationship between Shared Leadership and Project Performance is sequentially mediated first by Transactional Psychological Contract and then Knowledge Sharing.

Hypothesis 7B: The relationship between Shared Leadership and Project Performance is sequentially mediated first by Relational Psychological Contract and then Knowledge Sharing.

2.8 The Relationship between Shared Leadership and Psychological Contract is Moderated by Project Complexity

The relationship between an organization and its employees is primarily based on the psychological contracts (Liao & Chen, 2018). Psychological contracts are an important factor in determining the effort employees spend on their work (Landry et al., 2014). Employees have a psychological contractual belief regarding the nature of the exchange contract between the employee and the organization (Rousseau, 1989). In the context of this paper, we have assumed that project complexity (PC) plays an important role in relaxing the relationship between Shared Leadership and Psychological Contract. Increasing the complexity of the project will not facilitate shared leadership of psychological contracts. In the project, complexity is related to the interaction of dynamic elements with these elements across a wide range of categories of technology, organization, and environmental domains (Botchkarev & Finnigan, 2015).

For decades, complexity has been considered an important factor in the project management literature (A. Shenhar & Holzmann, 2017). With the rapid growth of complex projects in various industries, a growing body of research suggests that understanding project complexity is a key component of efficient project management (Luo et al., 2017). In terms of differentiation and dependency, project complexity is described as "composed of several different pieces that are interrelated and operational" (Baccarini, 1996).

Any project dimension significant to the project management process is considered as the definition of Project complexity. This covers planning, tools, decision-making, the office setting, data, and systems. Compared to other project management knowledge areas, the level of complexity in project management science is still quite low and not particularly advanced (Makui et al., 2018). Additionally, we discover in the literature that the idea of complexity is connected to the difficulty and interconnectedness of different system components (Geraldi, 2008).

A complex project may have a variety of features, including ambiguity or difficulty, the project's singularity, communication problems, and a lack of information clarity. In addition to the aforementioned traits, instability and a high level of misunderstanding further increase the project's complexity. Due to the complexity of projects, companies are under tremendous pressure to deliver the desired services (Pickavance, 2008). Projects may get complicated at some point and Shared Leadership, Psychological contracts, and knowledge sharing are required more. These complexities can be minimized or at least reduced with increased shared leadership leading to better employee and supervisor/manager relationships and increased information sharing eventually leading to better performance. All these factors lead to reduced project complexity. Project Complexity is identified in several ways (Luo et al., 2017; Hu, Chan, Le, & Jin, 2015). There is still room to uncover the moderating effect of the impact of project complexity on psychological contract (Hu et al., 2015).

When sticking to the concept of complexity, project complexity is considered a link between some project aspects and structural, dynamic, and uncertain assumptions (B. Xia & Chan, 2012). Project complexity is, in fact, a characteristic of a project that makes it difficult to understand, predict, and control the overall behavior of the project, even if reasonably complete information about the project system is obtained. Its drivers are factors related to project size, project diversity, project interdependence, and project context." More specifically, if employees have complex and rewarding tasks that are characterized by a high degree of autonomy, identity, feedback, skill diversity, and meaning, perform routine and simple tasks. Rather than humans, they tend to express their essential motives for developing creative outcomes (Shalley & Gilson, 2004).

By sharing leadership, supervisors can support and encourage employees to make special efforts to realize new solutions. Employees of different jobs can perform differently in terms of creativity. Especially those who are engaged in complicated work such as profession. Employees engaged in daily work. Insiders may have low awareness of creative role identities, low self-confidence in creative self-efficacy, and many restrictions in expressing creativity (D. Wang, Waldman, & Zhang, 2014). Previous studies have empirically supported these arguments.

For example, (A.-C. Wang & Cheng, 2010) used a sample of 167 supervisors and employee diads to help employees with high work complexity and autonomy positively between leadership and psychological contract. One of the most important tactics for improving project performance and ensuring successful project delivery is to manage project complexity (Luo et al., 2017). It can be defined as "consisting of many varied interrelated parts and can be operationalized in terms of differentiation and interdependency". Extant literature shows that the stream of positive outcomes somehow can be affected by such influential organizational elements.

In this study, moderating effect of supportive leadership is not supported by the results; most literature supports supportive leadership and its impact on performance but in the case of complexity literature found that project managers should think more critically and manage resources strategically (Zolin, Turner, & Remington, 2009), it isn't necessary that supportive leadership always works. Leadership support is required in difficult or complex situations but it is more important for the manager to take the right decision. Different projects require different types of leadership styles because of different project natures. A lenient and supportive attitude may not work in every project, especially where risks and interdependencies are high.

Therefore, we present the following hypothesis;

Hypothesis 8A: Project Complexity moderates the relationship between Shared Leadership and Transactional Psychological Contract in a way that it enhances the relationship.

Hypothesis 8B: Project Complexity moderates the relationship between shared leadership and Relational Psychological Contract in a way that it enhances the relationship.

2.9   Research Model

FIGURE 2.1: The Role of Shared Leadership in Project Performance: Sequential
Mediating Mechanism of Psychological Contract and Knowledge Sharing and
Project Complexity as Moderator

2.10   Summary of Research Hypotheses

H1: Shared Leadership positively affects Project Performance.

H2 A: Shared Leadership positively affects Transactional Psychological Contract.

H2 B: Shared Leadership positively affects Relational Psychological Contract.

H3 A: Transactional Psychological contract positively affects knowledge sharing.

H3 B: Relational Psychological contract positively affects knowledge sharing.

H4: Knowledge Sharing positively affects Project Performance.

H5 A: Transactional Psychological contract mediates the relationship between
Shared Leadership and Project Performance.

H5 B: Relational Psychological contract mediates the relationship between Shared
Leadership and Project Performance.

H 6: Knowledge Sharing mediates the relationship between Shared Leadership
and Project Performance.

H7 A: Relationship between shared leadership and project performance is sequen-
tially mediated by transactional psychological contract and knowledge sharing.

H7 B: Relationship between shared leadership and project performance is sequentially mediated by relational psychological contract and knowledge sharing.

H8 A: Project Complexity moderates the relationship between Shared Leadership and Transactional Psychological Contract in a way that it enhances the relationship.

H8 B: Project Complexity moderates the relationship between Shared Leadership and Relational Psychological Contract in a way that it enhances the relationship.

Chapter 3

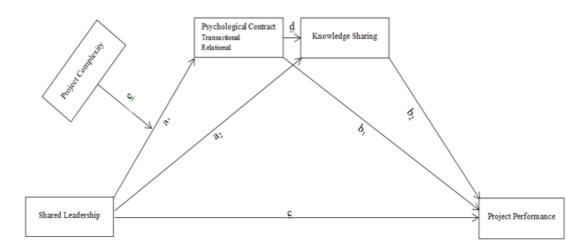# Research Methodology

3.1 Research Design

3.1.1 Type of Study

The present study examines the effect of shared leadership on project performance among the Rawalpindi and Islamabad project-based organizations. It also studies the impact of psychological contract and knowledge sharing of employees as mediators and project complexity as moderator to further deepen the relationship of shared leadership with psychological contract.

3.1.2 Quantitative Research

For research, there are two options either qualitative research or quantitative research. The present research is based on quantitative research as data was collected by respondents through questionnaires for the findings. Different statistical tools were used to test the data.

3.1.3 Cross-Sectional Study

The present study is cross-sectional in nature concerning the time horizon. In a cross-sectional study, data was collected at a single time period and then used for further research.

3.1.4 Unit of Analysis

The unit of analysis is the entity or object that is under study for research purposes. That entity may be an individual, group of people, or organization (can be cultures as well). In the present study, the unit of analysis is the project employees working in project-based organizations (specifically IT sector) in Islamabad and Rawalpindi in Pakistan.

3.2 Population and, Sample

3.2.1 Population

The population included employees as subordinates and supervisors working in Information Technology companies in Pakistan. The reason for targeting these sectors was that they usually have a project-based structure and setup and psychological contract in project-based organizations is very unpredictable, which leads to challenges in project outcomes. Around 384 questionnaires were distributed in the organizations. This sample size was suggested by (Sekaran & Bougie, 2016) and (Krejcie & Morgan, 1970) For legitimate responses, all respondents were guaranteed confidentiality and anonymity. A total of 284 responses were considered, which constitutes a 73% response rate. 100 responses were excluded because they were either incomplete or had been answered twice for some questions. Because of time and resources constraint below mentioned methods were used for data collection in this study. Questionnaires were distributed personally and online as well to get spontaneous responses.

3.2.2 Sampling

The most common technique used for data collection is sampling. For the present study, the non-probability sampling technique (snowball sampling) was used. Due to time and resource limitations, as it is extremely challenging to gather data from the entire population, therefore sampling is a widely adopted data collection method. For the current study, those organizations were contacted that had more

interaction among supervisors and employees because of that, the relationship between supervisor and employee and their effect on project performance can be studied. Therefore, the selected sample for the study consists of all essentials required to obtain the needed results and it shows the true illustration of the required population. This study is going to contribute to novel details of the shared leadership and their impact on project performance, the sample size consists of employees of project-based organizations specifically the information technology sector; henceforward data collection was done through self-administered questionnaires distributed online and in-person in twin cities (Rawalpindi/Islamabad). IT experts were contacted and after obtaining questionnaires back they were requested to provide names of 3-5 other IT experts working on different positions which can be contacted in other organizations. It was so helpful, thus we managed to obtain desirable response.

3.3   Sample Characteristics

Sample characteristics include demographic data used in questionnaires for research purposes. Age, gender, qualifications, and experience. Sample characteristic details are given below:

3.3.1   Gender

Despite the fact that this study attempted to ensure equality, it was discovered that the number of male employees is substantially greater than the number of female employees. The male-female ratio is shown in **Table 3.1**, with 77.5% of respondents being male and 22.5% being female.

TABLE 3.1: Frequency by Gender

Gender	Frequency	Percentage
Male	220	77.5
Female	64	22.5
Total	284	100
Mean	1.23	
SD	0.41	

3.3.2 Age

The information about age, was collected in different ranges. It has been shown in **Table: 3.2** that most of the respondents fall in age range between 26- 35, which means 73.6% of the majority of the respondents were having ages between 26-35, 17.3% of the respondents were having ages ranging between 20-25 whereas, 9.2% of respondents were between the ages of 36 and 45. No respondents were 46 or above in age.

TABLE 3.2: Frequency by Age

Age	Frequency	Percentage
20-25	49	17.3
26-35	209	73.6
36-45	26	9.2
46 or above	0	0
Total	284	100
Mean	1.92	
SD	0.5	

3.3.3 Qualification

Education is the primary characteristic that leads to the progress and development of the entire nation, as well as the fundamental requirement for global success. Qualification is a fervent demographic dimension because education opens up numerous new and distinct paths to success. According to Table 3.3, the majority of participants who qualified for a bachelor's degree, or 49.6% of all respondents, were designated as the authentic demonstrative sample of the entire population. 45.4% of survey participants had a Masters/MS degree, whereas 4.9% had other qualifications.

TABLE 3.3: Frequency by Qualification

Qualification	Frequency	Percentage
Bachelor's	141	49.6
Masters/MS	129	45.4
Other	14	4.9
Total	284	100
Mean	1.55	
SD	0.58	

3.3.4 Experience

To collect data about the experience of the respondents, different categories of experience in years have been adopted. So, that the respondents can easily select their specified tenure of experience. According to Table No. 3.4, the majority of respondents had experience ranging between 1-3 years, indicating that 51.1%, 23.6% of respondents had an experience of less than a year, 20.8% of respondents had an experience ranging between 3-5 years, and 4.6% respondents had experience of more than 5 years.

TABLE 3.4: Frequency by Experience

Experience	Frequency	Percentage
Less than a year	67	23.6
1-3 Years	145	51.1
3-5 Years	59	20.8
More than 5 Years	13	4.6
Total	284	100
Mean	2.06	
SD	0.79	

3.3.5 Instrumentation

3.3.6 Measures

Adopted questionnaires based on the Likert scale were used as an instrument for this study. All scales were acceptable by passing the reliability test. The questionnaire included 74 questions in total and had 6 sections i.e, Demographics, Shared

leadership, Psychological contract, Knowledge sharing, Project Performance, and Project Complexity. Four demographic variables in the questionnaire included, which consist of information regarding the respondent's gender, age, qualification, and work experience.

3.3.7 Shared Leadership

The 12 items scale with a five-point Likert scale was used to measure shared leadership, developed by (Stagnaro, Piotrowski, et al., 2013) ranging from 1 (Never) to 5 (always). Sample items are as follows: "When faced with a specific problem, my supervisor consults with the subordinates" and "Before making a final decision, my supervisor gives serious consideration to what my subordinates have to say."

3.3.8 Project Performance

Project Performance was measured by using the (Gu, Hoffman, Cao, & Schniederjans, 2014) 8 items scale with a 7-point Likert scale. Sample scale items included "Projects are completed on time." and "Projects met budget requirements".

3.3.9 Psychological Contract

A 33-item scale was used to measure the psychological contract of the employees dimension wise i.e; a Transactional psychological contract consisting of 20 items and a Relational psychological contract consisting of 13 items. It was developed by (Millward & Hopkins, 1998) and was used in recent studies by different authors (Braekkan, 2012; Jabeen, Behery, & Elanain, 2015; Patrick, 2008; Syama & Sulphey, 2014; Pramudita, Sukoco, Wu, & Usman, 2021). The responses were collected through a 7-point Likert scale ranging from 1=, strongly disagree to 7= strongly agree.

3.3.10 Knowledge Sharing

The 6-item scale was used to assess knowledge sharing (Park & Lee, 2014). Sample items of knowledge sharing are "We shared the minutes of meetings or discussion

records in an effective way" and "We always provided technical documents, including manuals, books, training materials to each other." Which were assessed using a 7-point Likert scale ranging from 1 to 7, with 1 being strongly disagree and 7 being strongly agree.

3.3.11 Project Complexity

The project complexity was measured using a fifteen-item scale developed by (W. Xia & Lee, 2004). The two sample items include "The project team was cross-functional" and "The project involved multiple external contractors and Vendors". It was used by used in recent studies as well (Park & Lee, 2014). The responses were gathered using a 5-point Likert scale, with 1 indicating strongly disagree and 5 indicating strongly agree.

TABLE 3.5: Instruments

Variables	Scale	Items
Shared Leadership	(Stagnaro et al., 2013)	12
(IV)		
Project Performance	(Gu et al., 2014)	8
(DV)		
Psychological Contract(Transactional & Relational)	(Millward & Hopkins, 1998)	33
(Med 1)		
Knowledge Sharing	(Park & Lee, 2014)	6
(Med 2)		
Project Complexity	(W. Xia & Lee, 2004)	15
(Mod)		

3.4 Statistical Tool

SPSS version 22 was used for data analysis. Multiple tools and techniques were used for data analysis, for example correlation, regression, One Way Anova etc. Correlation analysis was used to explore association among study variables. It

does not show a causal relationship among variables; it suggests the existence between variables. Process Macros of Hayes was used to discover the regression effect suggested in extant research (Hayes & Preacher, 2014).

3.5 Pilot Testing

Pilot testing is a preliminary, small-scale "pre-test" in which you test the methods before implementing them on large scale. Therefore, pilot testing was performed on 40 questionnaires to evaluate if the respondents understood the questionnaire and are streamed with the planned hypothesis. No issues were found with the variables in the pilot testing and all the scales were fit for further testing.

3.5.1 Reliability Analysis of the Scales Used

Reliability refers to the consistency of results by using the same instrument more than once. A specific instrument is known as reliable when it produces the same results when performed multiple times. Internal reliability of variables was tested through Cronbach's alpha in reliability analysis.

TABLE 3.6: Scale Reliability

Variables	Cronbach alpha	Items
Shared Leadership (IV)	0.71	12
Project Performance (DV)	0.78	8
Psychological Contract (Med 1)		
Transactional Psychological Contract	0.81	20
Relational Psychological Contract	0.78	13
Knowledge Sharing (Med 2)	0.76	6
Project Complexity (Mod)	0.75	15

The test revealed the relationship between the variables. Cronbach alpha values range from 0 to 1. If the value will be greater, the scale's dependability will also improve. Cronbach alpha values greater than 0.7 are considered desirable, while

values less than 0.7 are considered undesirable. The reliability test results are shown in table 3.6 below.

3.5.2 Data Analysis Technique

The data were analyzed in the SPSS version 22. The steps to analyze the data were:

1. Only those questionnaires were considered that were filled properly.

2. Frequency tables were used to study sample characteristics.

3. The Reliability of all variables was analyzed.

4. Frequency tables of demographic variables.

5. Descriptive statistics like mean, standard deviations, and correlation were performed.

6. Inferential analysis like ANOVA was performed to check the significance of demographics.

7. All hypotheses were tested in the model through the Hayes process macro individually.

Chapter 4

Results and Findings

4.1 Descriptive Analysis

Descriptive statistics illustrate the summarized information of observation which can be developed from the information by the use of numerous statistical tools. Descriptive statistics of every variable explored, which includes shared leadership, project performance, psychological contract (both transactional and relational psychological contract), knowledge sharing, and project complexity. SPSS 22 was used to calculate the means and standard deviations as well. Higher mean values display respondents' exposure toward the agreeable aspect and while lower values indicate respondents' tendency for disagreement.

TABLE 4.1: Descriptive Statistics

Variables	Sample	Min.	Max.	Mean	Std.Dev.
Shared Leadership(1V)	284	1	5	3.96	0.51
Project Performance (DV)	284	1	7	5.31	0.83
Psychological Contract (Med1)					
Transactional Psychological Contract	284	1	7	4.69	0.56
Relational Psychological Contract	284	1	7	4.96	0.72
Knowledge Sharing (Med 2)	284	1	7	5.48	0.91
Project Complexity (Mod)	284	1	5	3.75	0.44

Table 4.1 shows specifics about variables. The mean value of shared leadership (independent variable) is 3.96, and the standard deviation is 0.51. Project performance (dependent variable) has a mean value of 5.31 and a standard deviation of 0.83. Transactional Psychological Contract has a mean value of 4.69 and a standard deviation of 0.56 in Psychological Contract (mediator 1), whereas Relational Psychological Contract has a mean value of 4.96 and a standard deviation of 0.72 in Psychological Contract (mediator 1). The mean value for knowledge sharing (mediator 2) is 5.48, with a standard deviation of 0.91. The standard deviation for project complexity is 0.44 and the mean value is 3.75.

4.2 Control Variables

Using SPSS 22, the researcher carried out a one-way ANOVA. One-way ANOVA was used to determine whether demographic variables have an influence on the dependent variable, which is project performance. The new aspect of control variables is their non-essential nature. We should not evaluate these variables for supposition and research hypotheses of any exploration because of their nature.

The results of the insignificant difference in project performance were gender (F=0.957, p>0.05), age (F=1.278, p>0.05), Qualification (F=1.223, p>0.05), Experience (F=1.033, p>0.05). As a result, all values indicate insignificant relationships, indicating that there is no need to confound such control factors as they are not causing a disturbance in the analysis of project performance.

4.3 Correlation Analysis

Correlation table 4.2 analysis reveals a significant positive relationship between Shared leadership and Project Complexity (r = 0.58** at p < 0.01). Furthermore, shared leadership is associated with Transactional psychological contracts (r = 0.63** at p < 0.01) and Relational psychological contracts (r = 0.47** at p < 0.01). Shared leadership and knowledge sharing have a significant positive relationship (r = 0.52** at p < 0.01). Furthermore, shared leadership has a significant positive relationship with project performance (r = 0.53** at p < 0.01). Furthermore,

Transactional psychological contract has a positive relationship with Relational psychological contract (r = 0.66** at p < 0.01).

Knowledge sharing has a positive relationship with transactional psychological contract (r = 0.68** at p < 0.01). There is a significant positive relationship between Transactional psychological contract and Project Performance as (r = 0.62** at p < 0.01) and Transactional psychological contract also has a significantly positive relationship with Project complexity as (r = 0.61** at p < 0.01). A significant positive relationship between Relational psychological contract and Knowledge sharing where (r = 0.66** at p < 0.01). Furthermore, Relational psychological contract has a consequential positive association Project performance where (r = 0.62** at p < 0.01). , Relational psychological contract holds a substantial positive association with Project complexity under (r = 0.54** at p < 0.01). There is a significant relationship between Knowledge sharing and Project performance as (r = 0.69** at p < 0.01). Knowledge sharing is positively associated with Project complexity as (r = 0.60** at p < 0.01). Similarly, there is also a favorable association between Project Performance and Project Complexity under (r = 0.57* at p < 0.01).

TABLE 4.2: Correlation

Variables	1	2	3	4	5	6
Shared Leadership(1V)	1					
Transactional Psychological Contract (Med 1.1)	0.63**	1				
Relational Psychological Contract (Med 1.2)	0.47**	0.66**	1			
Knowledge Sharing (Med 2)	0.52**	0.68**	0.66**	1		
Project Performance (DV)	0.53**	0.62**	0.62**	0.69**	1	
Project Complexity (Mod)	0.58**	0.61**	0.54**	0.60**	0.57**	1

TABLE 4.3: Regression Analysis for Direct and Indirect Effect

Direct Effect	β	S.E.	P Value	LLCI	ULCI
H1: Shared Leadership → Project Performance	0.53	0.08	0.00	0.71	1.02
H2A: Shared Leadership → Transactional Psychological Contract	0.63	0.05	0.00	0.60	0.79
H2B: Shared Leadership → Relational Psychological Contract	0.47	0.07	0.00	0.51	0.8
H3A: Transactional Psychological Contract → Knowledge Sharing	0.58	0.09	0.00	0.77	1.12
H3B: Relational Psychological Contract → Knowledge Sharing	0.53	0.06	0.00	0.56	0.80
H4: Knowledge Sharing → Project Performance	0.47	0.5	0.00	0.32	0.52
Indirect Effect	β	S.E.		LLCI	ULCI
H5A: Shared Leadership → Transactional Psychological Contract → Project Performance	0.12	0.04		0.02	0.21
H5B: Shared Leadership → Relational Psychological Contract → Project Performance	0.12	0.03		0.04	0.19
H6: Shared Leadership→ Knowledge Sharing → Project Performance	0.06	0.02		0.01	0.11

N=284, *p<.05, **p<.01, S. E= Standard Error, LL= Lower Limit, UL= Upper Limit.

4.4   Regression Analysis

To determine the relationship among variables, correlation analysis was used. The results of a correlation analysis only show that association between two variables exist; they do not show how they are related causally. Various techniques and tools are used for regression analysis, including the Hayes and Preacher, (2014) full scale by utilizing SPSS for examination of mediation and moderation. More specifically, in Hayes and Preacher, (2014) the data is distributed into small portions and bits, increasing the relative accuracy of the data. Model 6 was used to identify direct and indirect effects for regression analysis. The details about results have been discussed below.

Hypothesis 1: Shared Leadership positively affects Project Performance.

H1 results in **Table 4.3** showed that Shared Leadership has a positive effect on Project Performance. According to results ($\beta = 0.53$, p $= 0.001$), there is a positive effect of Shared Leadership on Project Performance. Thus, the hypothesis is accepted.

Hypothesis 2A: Shared Leadership positively affects Transactional Psychological Contract.

Results of H2a in **Table 4.3** showed that Shared Leadership positively affects Transactional Psychological Contract. As ($\beta = 0.63$, p $= <0.001$) indicating that there is linear relationship between Shared Leadership and the Transactional Psychological Contract. Moreover, the sign of β showed that this relationship is positive. The proposed hypothesis thus considered accepted.

Hypothesis 2 B: Shared Leadership positively affects Relational Psychological Contract.

Results of H2a in **Table 4.3** showed that Shared Leadership positively affects Relational Psychological Contract. As results ($\beta = 0.47$, p $= <0.001$) indicating that there is linear relationship between Shared Leadership and the Relational Psychological Contract. Moreover, the sign of β showed that this relationship is positive. Therefore, hypothesis is accepted.

Hypothesis 3A: Transactional Psychological contract positively affects knowledge sharing.

Results of H3a in **Table 4.3** showed that Transactional Psychological Contract has a significant effect on Knowledge Sharing. As results ($\beta = 0.58$, p $= < 0.01$) indicates that for Transactional Psychological Contract and Knowledge Sharing got accepted.

Hypothesis 3B: Relational Psychological contract positively affects knowledge sharing.

Results of H3b in **Table 4.3** showed that Relational Psychological Contract has a positive effect on Knowledge Sharing. As results ($\beta = 0.53$, p $= < 0.001$) indicates that there is a linear relationship between Relational Psychological Contract and Knowledge Sharing. Moreover, the sign of β showed that this relationship is positive, thus hypothesis is accepted

Hypothesis 4: Knowledge Sharing positively affects Project Performance

Results of H4 in **Table 4.3** showed that Knowledge Sharing positively affects Project Performance. As ($\beta = 0.47$, p $= < 0.001$) indicates that there is a linear relationship between Knowledge Sharing positively affecting Project Performance. So hypothesis got accepted.

Hypothesis 5A: Transactional Psychological contract mediates the relationship between Shared Leadership and Project Performance.

Results of H5A in **Table 4.3** showed that Transactional Psychological Contract did mediate the relationship between Shared Leadership and Knowledge Sharing. As results ($\beta= 0.12$, p $= < 0.001$) indicates Transactional Psychological Contract is the mediator for the relationship between Shared Leadership and Knowledge Sharing. As the upper and lower limit values also in same direction. Thus hypothesis considered accepted.

Hypothesis 5B: Relational Psychological contract mediates the relationship between Shared Leadership and Project Performance.

According to H5B results in **Table 4.3**, Relational Psychological Contract did act as a mediator among Shared Leadership and Sharing Of knowledge. As ($\beta= 0.12$, p $= < 0.001$) indicates the Relational Psychological Contract does serve as

a bridge between Shared Leadership and Knowledge Sharing. As the upper and lower limit values also in same direction. Thus hypothesis considered accepted.

Hypothesis 6: Knowledge Sharing mediates the relationship between Shared Leadership and Project Performance.

According to H6a results in **Table 4.3**, the relationship between Transactional Psychological Contract and Project Performance is mediated by Knowledge Sharing. As ($\beta = 0.06$, p = < 0.001) shows, Knowledge Sharing mediates the relationship between Transactional Psychological Contract and Project Performance. As the upper and lower limit values also in same direction. Thus hypothesis considered accepted.

TABLE 4.4: Sequentially Mediation

Sequentially mediation	β	S.E.	LLCI	ULCI
H7A: Shared Leadership → Transactional Psychological Contract→ Knowledge Sharing→ Project Performance	0.17	0.04	0.09	0.25
H7B: Shared Leadership → Relational Psychological Contract→ Knowledge Sharing→ Project Performance	0.1	0.03	0.04	0.16

Hypothesis 7A: Relationship between shared leadership and project performance is sequentially mediated by transactional psychological contract and knowledge sharing

Results of H7 A in **Table 4.4** showed the relationship between Shared Leadership and Project Performance is sequentially mediated first by Transactional Psychological Contract and then by Knowledge Sharing. As (β= 0.17, p = < 0.001) indicates that both Transactional Psychological Contract and Knowledge Sharing are sequentially mediating the relationship between Shared Leadership and Project Performance. Additionally, the upper and lower limit values also in same direction. Thus, hypothesis considered accepted.

Hypothesis 7B: Relationship between shared leadership and project performance is sequentially mediated by relational psychological contract and knowledge sharing.

The results of H7 B in **Table 4.4** demonstrated that the relationship between Shared Leadership and Project Performance is mediated sequentially by Relational Psychological Contract and then Knowledge Sharing. As (β = 0.10, p = < 0.001) indicates, Relational Psychological Contract and Knowledge Sharing mediate the relationship between Shared Leadership and Project Performance sequentially. Additionally, the upper and lower limit values also in same direction. Thus, hypothesis considered accepted.

TABLE 4.5: Moderation

Moderator: Project Complexity	β	S.E.	P Value	LLCI	ULCI
H8 A: Project Complexity → Shared Leadership → Transactional Psychological Contract	-0.63	0.06	0.00	-0.77	-0.50
H8 B: Project Complexity → Shared Leadership → Relational Psychological Contract	-1.00	0.09	0.00	-1.18	-0.81

Hypothesis 8A: Project Complexity moderates the relationship between Shared Leadership and Transactional Psychological Contract.

Project Complexity did not moderate the relationship between Shared Leadership and Transactional Psychological Contract, according to the results of H8a in Table 4.5. Model 1 was used to identify does it buffer or enhance the proposed relationship between IV and mediator 1. The interaction term of Shared Leadership and Project Complexity is significant but negative (β = -0.63=, p =0.00). The hypothesis developed was considered to have a positive significant relationship between SL and PC, but the results indicate that Project Complexity moderates the relationship between Shared Leadership and Transactional Psychological Contract in opposite direction thus the hypothesis is rejected.

Hypothesis 8B: Project Complexity moderates the relationship between Shared Leadership and Relational Psychological Contract.

Table 4.5 shows that H8a did not moderate the relationship between Shared Leadership and Relational Psychological Contract. As (β =-1.00, p =0.00), the

interaction term between Shared Leadership and Project Complexity is significant but negative whereas, the hypothesis suggested a significant positive relationship. This indicates that the Project Complexity moderates the relationship between Shared Leadership and Relational Psychological Contract in opposite direction thus the hypothesis is rejected.

TABLE 4.6: Model Results Summary

	Hypothesis Statement	Result
H1	Shared Leadership positively affects Project Performance.	Supported
H2 A	Shared Leadership positively affects Transactional Psychological Contract.	Supported
H2 B	Shared Leadership positively affects Relational Psychological Contract.	Supported
H3 A	Transactional Psychological contract positively affects knowledge sharing.	Supported
H3 B	Relational Psychological contract positively affects knowledge sharing.	Supported
H4	Knowledge Sharing positively affects Project Performance.	Supported
H5 A	Transactional Psychological contract mediates the relationship between Shared Leadership and Project Performance	Supported
H5 B	Relational Psychological contract mediates the relationship between Shared Leadership and Project Performance.	Supported
H6	Knowledge Sharing mediates the relationship between Shared Leadership and Project Performance	Supported
H7 A	Relationship between shared leadership and project performance is sequentially mediated by transactional psychological contract and knowledge sharing.	Supported
H7 B	Relationship between shared leadership and project performance is sequentially mediated by relational psychological contract and knowledge sharing.	Supported
H8 A	Project Complexity moderates the relationship between Shared Leadership and Transactional Psychological Contract.	Not Supported
H8 B	Project Complexity moderates the relationship between Shared Leadership and Relational Psychological Contract.	Not Supported

Chapter 5

Discussion and Conclusion

5.1 Discussion

The discussion about the outcome of the proposed research model has been revealed in this chapter. The primary goal of this study was to look into the effect of shared leadership on project performance, using the psychological contract (transactional psychological contract and relational psychological contract) and knowledge sharing serving as mediators and project complexity as a moderator. For this purpose, data for the hypotheses proposed were gathered for the Rawalpindi and Islamabad Information Technology Sectors.

This chapter highlights the outcomes of hypothesis evaluation with the help of suitable references from previous studies just relevant to the current study. The research results revealed a positive link between shared leadership, relational psychological contract, knowledge sharing, and project performance. The principal goal of the present study was to show how shared leadership affects the performance of the project in project-based associations, particularly in the information technology industry.

The theoretical framework was created on the assumption that the variables of the study somehow related to one another. According to the findings of this research, shared leadership has a significant positive impact on the project's performance as well as on psychological contracts, both transactional and relational psychological contracts. Both transactional and relational psychological contracts had

a positive relationship with knowledge sharing, and knowledge sharing improved project performance. The relationship between shared leadership and project performance was first mediated by a transactional psychological contract and then by a relational psychological contract and knowledge sharing. This study examined the significance of shared leadership in an IT particular project, and how shared leadership brings to project properties, primarily fostering psychological contract and sharing of knowledge among members, and enhancing the performance of projects.

5.1.1   Hypothesis No. 1

H1: Shared Leadership positively affects Project Performance.

According to Hypothesis 1, shared leadership is unquestionably associated with improved project performance. The findings support the hypothesis that there is a positive and beneficial correlation between shared leadership and performance outcomes. The results are consistent with hypothesis indicating that if there is even a minor increase in shared leadership, project performance will improve accordingly. Previous research also supports this hypothesis as: in a recent meta-analysis of 42 studies, shared leadership was found to be positively related to groups as well as organizational performance (C.-J. Wang et al., 2014).

This study has justified the importance and positive effect of shared leadership on project performance as demonstrated in the hypothesis under observation. With the contribution of the literature and acceptance of our proposed hypothesis, it has been recognized that the leadership traits in the organization in form of shared leadership have a prominent, positive impact on the performance of the project.

This study also signifies that the shared leadership in the project-based organization leads to better association with the employees and supervisors, motivating them to work harder with more tendency of sharing ideas and information among themselves. Because it gives team members control and influence in addition to delegating accountability for actions, the current study supports the claim that a collaborative leadership approach is a key factor in the success of IT projects.

This encourages team members to put forth greater effort on the project. In simple words, employees generally save their individual actions for accomplishing their own objectives, but if they are shared leadership, they start to use their personal abilities to achieve project goals.

5.1.2   Hypothesis No. 2

H2 A: Shared Leadership positively affects Transactional Psychological Contract.

H2 B: Shared Leadership positively affects Relational Psychological Contract.

Hypothesis 2 shows that shared leadership has a positive effect on the transactional psychological contract. Hypothetical results visualize significant and positive relationships between shared leadership and psychological contracts that support the hypotheses. The results indicate that shared leadership can increase the psychological contract (TPC & RPC). Empirical evidence supported the relationship between shared leadership and psychological contract, confirming its importance in the workplace. The reason could be the feeling of ownership, association and belongingness, which is ultimate result of shared leadership. Additionally, employees feel more knowledgeable, competent and informed, thus it enhances their transactional and relational psychological contract. As on one end they feel they are paid for their services and on the other end they feel that leaders own them, guide them and support them. Ultimately, they feel accomplished and feel psychologically associated with the organization and management.

Furthermore, the findings also contribute in LMX theory. We found that LMX was positively associated with both transactional and relational psychological contracts. It is noteworthy that limited studies explored LMX-TPC relationship. However, these results were to be expected given that relationship quality is far less emphasized in trading psychology contracts, in direct contrast to LMX. This suggests that the higher the quality of shared leadership the higher is the level of transactional and relational psychological contract.

5.1.3 Hypothesis No. 3

H3 A: Transactional Psychological contract positively affects knowledge sharing.

H3 B: Relational Psychological contract positively affects knowledge sharing.

Hypotheses 3A and 3B were accepted in this study. In support of the hypothesis, the findings show a significant relationship between psychological contract and knowledge sharing. This study's empirical evidence suggests that employee psychological engagement influences knowledge-sharing behavior positively. These findings are consistent with previous research (Bankins et al., 2020). Employee perceptions of the psychological contract's relational component may influence attitudes and actions toward the entire organization, including knowledge sharing (Atkinson, 2007). Besides that, psychological contracts boost employees' creative thinking through sharing knowledge. The reason could be logical, as when employees feel emotionally attached with organization, they own it, they become more concerned for the outcomes, so they discuss pros and cons, possible outcomes, share their ideas and strive for the improvement and goal achievement. Thus, it is proved that psychological contract in both forms enhance knowledge sharing behavior in employees. The study findings also confirm the clue given in last decade (Abdullah et al., 2011).

5.1.4 Hypothesis No. 4

H4: Knowledge Sharing positively affects Project Performance.

In hypothesis 4, we speculate that knowledge sharing improves project performance. Our findings support our research hypotheses, and tests proved that sharing of knowledge within and between members has a significant and direct effect on project performance. The results are in line with previous research (Nesheim & Hunskaar, 2015; L.-R. Yang, Chen, & Wang, 2012). According to research, the trend of sharing knowledge inside an organization supports attaining greater

performance and operational goals (L. Zhang & Li, 2016). So the findings supported the fourth hypothesis, which stated that "sharing knowledge is positively and significantly related to project performance." Enhanced knowledge sharing in project-based organizations tends to increase the likelihood of project performance.

Project managers share knowledge with their subordinates in project-based organizations. They encourage members of various departments to work together with other members of the team to create additional information. This knowledge then applied to problem-solving and making the job more competent and effective. The findings of this study indicate that enhancing project performance can be accomplished by increasing sharing of knowledge within the organization.

5.1.5 Hypothesis No. 5

H5 A: Transactional Psychological contract mediates the relationship between Shared Leadership and Project Performance.

H5 B: Relational Psychological contract mediates the relationship between Shared Leadership and Project Performance.

The research model and the moderated mediation model were tested using bootstrap analyses in this study (Hayes, 2009). Hypothesis 5A and 5B indicates that the psychological contract (TPC & RPC) had a positive mediating impact on the project performance relationship. Previous studies have provided clue in support of this hypothesis. Psychological contracts have an effect on project performance in businesses, and there is a link between psychological contracts and employee outcomes (Sandhya & Sulphey, 2020; C.-J. Wang et al., 2014). With the assistance of Leadership Member Exchange Theory, this research attempted to verify the influence of shared leadership on project performance through the mediating role of psychological contract. It is due to the fact that it reduces the work pressure, as in existence of shared leadership employees feel more confident, knowledgeable. Ultimately feel connected and become more active and participative for project completion. Thus, psychological contract in each form improves project performance.

5.1.6   Hypothesis No. 6

H6: Knowledge Sharing mediates the relationship between Shared Leadership and Project Performance.

Hypothesis 6 proposes that knowledge sharing acts as a mediator between shared leadership and the performance of projects. Our findings confirm the hypothesis, as leadership characteristics are associated with task-oriented assistance. In goal achievement shared leadership brings clarity which one needs to obtain when goals achievement is concerned. Extant research indicates that knowledge diversity and relationships within members perform significant roles in determining knowledge reclaim behavior patterns. These leadership practices include characteristics that nourish team members and improve their performance (Love, Smith, Ackermann, & Irani, 2019). It smoothens the process, encourage everyone to become more participative and improve goal accomplishment and project performance.

Furthermore, the results confirm the clue given in previous research about relationship between knowledge sharing and project performance outcomes (Rauniar, Rawski, Morgan, & Mishra, 2019). Additionally, knowledge sharing that is encouraged by shared leadership greatly enhances project performance. This is because of the complexity of IT projects, which involve sophisticated technologies and challenging tasks (such as transaction processing and analysis), as well as the fact that employees working on these projects are typically experts in particular knowledge domains. As a result, sharing knowledge is a preferred strategy for improving employees' perceptions regarding technical projects.

5.1.7   Hypothesis No. 7

H7 A: Relationship between shared leadership and project performance is sequentially mediated by transactional psychological contract and knowledge sharing.

H7 B: Relationship between shared leadership and project performance is sequentially mediated by relational psychological contract and knowledge sharing.

Shared leadership had a significant impact on project performance. The effect of shared leadership was mediated by fulfilled relational and transactional psychological contracts, according to H8a and H8b. The findings indicate that shared leadership and the relational psychological contract are significantly related to project performance and then knowledge sharing, substantiating previous research that found positive effects of shared leadership (Felfe, 2006). Our research, on the other hand, is unique in that it connects shared leadership to psychological contracts and then to knowledge sharing.

Furthermore, the results show a significant direct effect, implying that both types of psychological contracts mediate the effect of shared leadership on project performance and, ultimately, knowledge sharing. As it is a psychological process. When employees are part of an organization their action and behavior are influenced by leadership style. When leaders share power, delegate some authority, share their organizational goals with employees, employees feel association, and if paid good they feel more benefited, ultimately become more productive. This ultimately contributes in project performance. Sharing knowledge motivate employees to communicate and nourish their professional skills. Organizations may be able to derive maximum sharing knowledge benefits by thoughtfully trying to align the exchange of knowledge standards with business goals at every step.

5.1.8   Hypothesis No. 8

H8 A: Project Complexity moderates the relationship between Shared Leadership and Transactional Psychological Contract.

H8 B: Project Complexity moderates the relationship between Shared Leadership and Relational Psychological Contract.

The results of this study do not support the moderating effect of project complexity. According to the findings of this study, there is a significant but negative relationship thus leads to the refusal of this proposed hypothesis. Most literature supports shared leadership and its impact on psychological contract, however, in the case of complexity, literature found that project leaders think more critically

and manage the resources strategically. "Project complexity moderates the relationship of SL and PS," indicating that when project complexity is significant, the relationship between SL and PS strengthens. As complex projects need comprehensive discussion. The higher the level of project complexity, it demands higher level of shared leadership, and it ultimately leads to higher level of emotional associations.

The reason which we identified for the negatively significant relation is that the majority of the respondents were freshers, who were enjoying the start of their career, with great passion and enthusiasm they might not be considering project complexity to that level. Secondly, they might be handling fewer complex projects that's why they might not be able to identify its role in their projects and careers. There are frequent changes in project-based organizations specifically in IT sector which makes the projects complex and the reason for negatively significant relationship is that the whole mechanism cannot be implemented from shared leadership to psychological contract, knowledge sharing, and project performance during abrupt changes.

Thus, results revealed that the role of project complexity remained negatively significant.

5.2 Research Implications

5.2.1 Theoretical Implications

This study concludes, using research hypotheses and empirical evidence, that among Information Technology group participants, shared leadership adds value to project performance both immediately and through the psychological contract and knowledge sharing. Moreover, the role of Project complexity as moderator has been studied between shared leadership and psychological contract both (transactional and relational psychological contract). Limited studies shave been conducted about the relationship that has been discussed in this research for a broader spectrum. Thus, this study has strong theoretical contribution in form

of mediation. Additionally, sequentially mediated mechanism strengthens project related literature and brings more clarity by explain how actually it works.

The leadership member exchange theory (LMX) supports this study. The relationship that develops between supervisors and their team members is essential, according to the theory, go through three fundamental stages which are role-taking, role-making, and "routinization" (Contractor et al., 2012). Thus, when a supervisor is willing to support and facilitate subordinates, it clarifies roles and makes things easier for the followers. Furthermore, making them feel valuable allows them to feel connected to the project- based organization, which ultimately leads to positive attitudes and behaviors in the form of knowledge sharing. This can have a long-term impact on project performance. Furthermore, making them feel valuable allows them to feel connected to the organization, which ultimately leads to positive attitudes and behaviors in the form of knowledge sharing. This can have a long-term impact on project performance. Furthermore, project complexity in project- based organizations has a significant impact on the relationship between shared leadership and project performance. When project complexity increases, more shared leadership is required, which affects both supervisor and subordinate behaviors, increasing psychological contract and knowledge sharing, which ultimately improves project performance. Furthermore, making them feel important, makes them feel connected to the organization, which ultimately leads to positive attitudes and behaviors in the form of knowledge sharing. This can have a long-term impact on project performance. Additionally, project complexity can have an impact on the relationship between shared leadership and project performance.

LMX Theory has direct impact on the shared leadership in many ways and it also has an influence on how employees behave, which ultimately affects the relationship between supervisors and the subordinate. Micro-level changes in workers' perceptions of obligated and provided incentives are the outcome of a proper mechanism that indicates leader-member exchange (L.-R. Yang et al., 2012). When employees have a better relationship with supervisors, they tend to share more information and eventually better project performance, and if the project gets complex the influence of each factor increases as well.

5.2.2   Practical Implications

For managers in project-based organizations, the research offers a number of implications. Such interventions (for example, knowledge management tools) can be recommended to teams by project managers in order to foster shared leadership and knowledge sharing. Because it has a direct impact on project success, the research results confirm the significance of shared leadership in achieving project success. More importantly, shared leadership has the potential to improve knowledge sharing, resulting in a more positive learning workplace. This study suggests that shared leadership has a direct impact on project performance, based on theoretical arguments and empirical evidence through knowledge sharing and psychological contracts by motivating them toward mutually achieving objectives. Understanding the crucial role that leadership plays in project management, project managers and professionals should share their leadership responsibilities with team members in order to inspire them.

Knowledge sharing is intended to assist members (particularly those with less expertise or different skills) in dealing with stressful circumstances. For instance, modifications to the plan and budget are frequent in IT projects, and when they do, knowledge sharing is essential to ensuring smooth operation and resolving project ambiguity.

5.3   Research Limitations

All studies have some obstructions, in the current studies, there also are some boundaries as well, which have been tackled while researching considering the fact that all possible efforts were made to reach and acquire necessary standards of professional research. The sampling method is the study's first limitation. Data were gathered from a small number of businesses in Rawalpindi/Islamabad. Research results can be skewed if the number and location of participants are restricted. The data was then gathered using only one method. Questionnaire surveys were prone to methodological bias in general.

Secondly, time and resources were other limitations in the present study. A cross-sectional study was conducted due to limited time and resources as a longitudinal study design would have required sufficient time and resources. The cross-sectional study design does not allow us to draw unequivocal conclusions about mediation and coordinating effects between the investigated variables.

5.4   Future Research Directions

Every research study expands horizons and provides perspectives on future studies in the areas of focus. The impact of shared leadership on project performance was empirical evidence tested in this study, but it has unlocked numerous creative potential and ideas for future research. Since the study concentrated on project teams working within the geographical boundaries of Pakistan, where vertical leadership is a historically accepted way in work environments, the impact of both shared leadership (horizontal leadership) and vertical leadership can be studied simultaneously to determine the distinctions between both methods of project teams.

Furthermore, this study used project complexity as a moderator between shared leadership and psychological contract (TPC & RPC) which has been rejected, though the fact literature did suggest a positive relationship between shared leadership and psychological contract so, any other dimension (except TPC & RPC) can be used to test the impact on this model, or even same relationship can be tested with other moderating variables.

5.5   Conclusion

Using the mechanisms of the psychological contract and knowledge sharing, this study aimed to understand how shared leadership impacts project performance. The study also looked into whether the positive relationship between shared leadership, psychological contract, and knowledge sharing is moderated by project complexity. The results disproved the supposition that project complexity effect

the relationship between shared leadership and psychological contract (Transactional and relational). The LMX leadership theory validated both the study and the hypothesis developed.

Because there has been very little research on the impact of shared leadership on project performance with sequential mediation of the psychological contract, this study has made a significant contribution to the literature by studying the mediating roles of psychological contract (transactional psychological contract and relational psychological contract) and knowledge sharing with project complexity as a moderator. As the Psychological contract's dimensions are not explored enough so current findings provide a trackway for future dimensional studies of the psychological contract. Our study also accords different practical implications as well as provides insight for researchers to conduct further research.

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Appendix-A

Questionnaire

Dear Respondent

I am a student of MS degree and currently researching the topic of "The Role of Shared Leadership in Project Performance: Sequential Mediating mechanism of Psychological Contract and Knowledge Sharing, Project Complexity as moderator". You are one of my potential respondents and are requested to take 10 minutes of your busy schedule to fill out this questionnaire. Data is being captured anonymously and will be kept confidential. Responses will be used strictly for academic purposes and if you are interested to know the findings, you may contact the undersigned.

Sincerely,

Noureen,

MS PM Research Scholar,

Faculty of Management and Social Sciences,

Capital University Science and Technology, Islamabad.

Section 1: Demographics

Options	1	2	3	4
Gender	Male	Female	Prefer not to say	
Age	20-25	26-35	36-45	46 or Above
Qualification	Bachelors	Masters/MS	Other	
Experience	Less than a Year	1-3 Years	3-5 Years	More than 5 Years

Section 2:Shared Leadership

Please encircle an appropriate option: 1= Never, 2= Seldom, 3= occasionally, 4= Often and 5= Always

Sr. No	Items					
1	When faced with a specific problem, my supervisor consults with the subordinates	1	2	3	4	5
2	Before making a final decision, my supervisor gives serious consideration to what the subordinates have to say.	1	2	3	4	5
3	My supervisor asks the subordinates for their suggestions concerning how to carry out assignments or specific tasks.	1	2	3	4	5
4	Before taking final action on any specific aspect of the project, my supervisor consults with the subordinates	1	2	3	4	5
5	My supervisor asks the subordinates for suggestions on what assignments should be pursued or completed.	1	2	3	4	5

6	My supervisor staffs the project with team leaders for specialized groups such as a functional team or a technical team.	1	2	3	4	5
7	My supervisor generally allows team leads to provide input about the project team organization and roles, but make the final decisions	1	2	3	4	5
8	Decision-making authority for team lead roles is an important staffing consideration	1	2	3	4	5
9	My supervisor typically provides coaching to the project team leads so that they can be effective leaders	1	2	3	4	5
10	My supervisor generally allows the project team leads to make the decisions about how to design and execute the project's work products and then hold them accountable.	1	2	3	4	5
11	My supervisor provides the guidelines to team leads for how the project's work products should be performed and then they make decisions within the guidelines.	1	2	3	4	5
12	My supervisor typically makes the most of the key decisions about how the project's work products should be executed.	1	2	3	4	5

Section 3: Psychological Contract

Please encircle an appropriate option: 1= Strongly Disagree, 2= Disagree, 3= Somewhat Disagree, 4= Neutral, 5=Somewhat Agree, 6= Agree, and 7= Strongly Agree

Sr.no	Items							
	Transactional Items (20 Items)							

1	I do this job just for the money.	1	2	3	4	5	6	7
2	I prefer to work in a strictly defined set of working hours	1	2	3	4	5	6	7
3	I do not identify with the organization's goals.	1	2	3	4	5	6	7
4	It is important not to get too involved in your job.	1	2	3	4	5	6	7
5	I expect to be paid for any overtime I do.	1	2	3	4	5	6	7
6	I come to work purely to get the job done.	1	2	3	4	5	6	7
7	I intend to stay in this job for a long time (i.e., over 2 to 3 years).	1	2	3	4	5	6	7
8	My long-term future does not lie with this Organization.	1	2	3	4	5	6	7
9	My loyalty to the organization is contract specific.	1	2	3	4	5	6	7
10	I only carry out what is necessary to get the job done.	1	2	3	4	5	6	7
11	As long as I reach the targets specified in my job, I am satisfied.	1	2	3	4	5	6	7
12	I work only the hours set out in my contract and no more.	1	2	3	4	5	6	7
13	It is important not to get too attached to your place of work.	1	2	3	4	5	6	7
14	I work to achieve the purely short-term goals of my job.	1	2	3	4	5	6	7
15	My commitment to this organization is defined by my contract.	1	2	3	4	5	6	7
16	My long-term future lies within this organization.	1	2	3	4	5	6	7
17	I will work for this company indefinitely.	1	2	3	4	5	6	7

18	My job means more to me than just a means of paying the bills.	1	2	3	4	5	6	7
19	It is important to be flexible and to work irregular hours if necessary.	1	2	3	4	5	6	7
20	I am heavily involved in my place of work	1	2	3	4	5	6	7
	Relational Items (I3 Items)							
21	This job is a stepping stone in my career development.	1	2	3	4	5	6	7
22	I expect to develop my skills (via training) in this company.	1	2	3	4	5	6	7
23	I expect to gain promotion in this company with the length of service and effort to achieve goals.	1	2	3	4	5	6	7
24	I expect to grow in this organization.	1	2	3	4	5	6	7
25	To me working for this organization is like being a member of a family.	1	2	3	4	5	6	7
26	I feel part of a team in this organization.	1	2	3	4	5	6	7
27	I go out of my way for colleagues who I will call on at a later date to return the favor.	1	2	3	4	5	6	7
28	My job means more to me than just a means of paying the bills	1	2	3	4	5	6	7
29	I feel this company reciprocates the effort put in by its employees.	1	2	3	4	5	6	7
30	The organization develops rewards for employees who work hard and exert themselves	1	2	3	4	5	6	7
31	I am motivated to contribute 100\% to this company in return for future employment benefits.	1	2	3	4	5	6	7
32	I have a reasonable chance of promotion if I work hard	1	2	3	4	5	6	7

33	My career path in the organization is clearly mapped out.	1	2	3	4	5	6	7

Section 4 : Knowledge Sharing

Please encircle an appropriate option: 1= Strongly Disagree, 2= Disagree, 3= Somewhat Disagree, 4= Neutral, 5=Somewhat Agree, 6= Agree, and 7= Strongly Agree

Sr.No	Items							
1	We shared the minutes of meetings or discussion records in an effective way.	1	2	3	4	5	6	7
2	We always provided technical documents, including manuals, books, and training materials to each other.	1	2	3	4	5	6	7
3	We shared project plans and the project status in an effective way.	1	2	3	4	5	6	7
4	We always provided know-where or know-whom information to each other in an effective way.	1	2	3	4	5	6	7
5	We tried to share expertise from education or training in an effective way.	1	2	3	4	5	6	7
6	We always shared experience or know-how from working responsively and effectively	1	2	3	4	5	6	7

Section 5 Project Performance

Please encircle an appropriate option: 1= Strongly Disagree, 2= Disagree, 3= Somewhat Disagree, 4= Neutral, 5=Somewhat Agree, 6= Agree, and 7= Strongly Agree

Sr.No	Items							
1	Projects are completed on time.	1	2	3	4	5	6	7
2	Projects met budget requirements.	1	2	3	4	5	6	7
3	Projects met expectations.	1	2	3	4	5	6	7
4	Project team members are satisfied to work together	1	2	3	4	5	6	7
5	The benefits of projects to the organization are high.	1	2	3	4	5	6	7
6	Projects resulted in sales growth.	1	2	3	4	5	6	7
7	Projects helped the organization to increase market share.	1	2	3	4	5	6	7
8	Projects helped the organization improve its competitive position.	1	2	3	4	5	6	7

Section 6 Project Complexity

Please encircle an appropriate option: 1= Strongly Disagree, 2= Disagree, 3= Neutral, 4= Agree and 5= Strongly Agree

Sr.No	Items					
1	The project team was cross-functional	1	2	3	4	5
2	The project involved multiple external contractors and Vendors4	1	2	3	4	5
3	The project involved coordinating multiple user units	1	2	3	4	5
4	The system involved real-time data processing	1	2	3	4	5
5	The project involved multiple software environments	1	2	3	4	5
6	The project involved multiple technology platforms.	1	2	3	4	5

7	The project involved a lot of integration with other systems	1	2	3	4	5
8	The end-user's organizational structure changed rapidly	1	2	3	4	5
9	The end-user's business processes changed rapidly	1	2	3	4	5
10	Implementing the project caused changes in the users' business processes.	1	2	3	4	5
11	Implementing the project caused changes in the users' organizational structure.	1	2	3	4	5
12	The end-user's information needs changed rapidly.	1	2	3	4	5
13	IT infrastructure that the project depended on changed rapidly.	1	2	3	4	5
14	IT architecture that the project depended on changed rapidly.	1	2	3	4	5
15	Software development tools that the project depended on changed rapidly.	1	2	3	4	5