CAPITAL UNIVERSITY OF SCIENCE AND TECHNOLOGY, ISLAMABAD

Impact of Ambidextrous Leadership on Project Success with the Mediating Role of Innovation and Moderating Role of Self-Efficacy

by

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This thesis is devoted to my beloved parents Ahsan-ur-Rahim and Tasneem Ahsan, my supportive husband Ehsan Kayani and my respected teacher Ms. Sana Farzand Ali who guided me on each and every step and acknowledged me with treasure of knowledge

CERTIFICATE OF APPROVAL

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Abstract

The purpose of this research study was to empirically test the impact of ambidextrous leadership on project success with innovation as a mediator and self efficacy as a moderator. The sample was drawn using convenient sampling technique. The data were collected through survey method, from branches of telecom firms in Pakistan (n = 327). The data were analyzed using regression analyses. The findings suggested that there is positive and significant relationship between ambidextrous leadership and project success. For the projects to be successful, the leaders need to be ambidextrous by being explorative and exploitative according to the situation to meet challenges and overcome constraints. Innovation mediates the relationship between ambidextrous leadership and project success. Furthermore, results indicated that self efficacy positively moderates the relationship between innovation and project success. Comparatively a smaller sample size of 327 poses as a hindrance in a wider level generalization of the results. The study has practical implications on an organizational level, presenting certain guidelines to understand how ambidextrous leadership affects the success of projects within the organization.

Keywords: Ambidextrous Leadership, Project Success, Innovation, Self-Efficacy

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Abbreviations

AL	Ambidextrous Leadership
AGFI	Adjusted Goodness of Fit Index
CFA	Confirmatory Factor Analysis
CFI	Comparative Fit Index
GFI	Goodness of Fit Index
IN	Innovation
PS	Project Success
RMSEA	Root Mean Square Error of Approximation
SE	Self Efficacy
TLI	Tucker-Lewis Index

Chapter 1

Introduction

1.1 Background of the Study

Research in the past shows that a single leader is responsible for managing and controlling a group of followers (vertical and horizontal leadership styles) (Bass & Stogdill, 1990; Halal, 1994; Shane Wood & Fields, 2007). The key responsibilities of the leader are to give orders, delegate tasks, set priorities and expectations, support and guide, set standards and manage daily activities for the followers (Chin, 2015). This thinking and practice contradicts with the environment of most organizations today. Organizational leadership complexity has been intensified because of globalization and shifting the conventional balance of global power (Li, Wang, & Mobley, 2011).

Organizations need to focus on the well-organized management of current business demands as well as on possible opportunities and challenges occurring in the future at the same time (Baškarada & Watson, 2017). The organization must be able to get accustomed to the market environment and adopt a strategy that consists of distributing power so that it is able to compete as well as perform with other organizations globally (Conger, 1989; Callanan, 2004). They must adopt ambidexterity i.e. exploitation and exploration for prosperity and long term survival (Baškarada, Watson, & Cromarty, 2016). Due to the above mentioned challenges, organizations need to projectize their current operations.

Term ambidextrous leadership implies that leader is able to balance transformational and transactional leadership as the situation prevails (Voigt, 2014). An ambidextrous leader uses transformational leadership when he is faced with a dynamic environment and uses transactional leadership when he faces stable environment (Bucic, Robinson, & , 2010). Ambidextrous leader can imply opposing behavior depending on the context and situation. One aspect of ambidextrous leadership is that the leader demands the employees in a team to perform in such a way which the leader has pin pointed for achieving a goal. The other aspect is that the leader facilitates the employees in a team to explore widely for innovative ideas that are unhindered by the status quo and the potential opportunities the leader has in his mind (Rosing, Frese, & Bausch, 2011).

The importance of projects is growing every day. Projects are crucial not only for dealing with hurdles due to advancing technology, but they are also a source through which business can be made superior and improvements and changes can be put into practice (Andersen, Dyrhaug, & Jessen, 2002). Project manager integrates the concepts of management as well as leadership and acts as a combining force (Maylor, 2001), by influencing, guiding and giving orders (Bennis & Nanus, 1985). Project manager is classified by Project Management Institute (PMI®) as an individual who is authorized by the senior management to guide the team and direct it towards achieving project objectives (PMI, 2013). Hence, according to the above definition, leadership is an important role that a project manager has to play. As far as research in project management is concerned, leadership has been capturing the attention of researchers in the recent times (Muller et al., 2015). Leadership contributes towards project success and the personality of leader contributes about 43% in project success (Müller & Turner, 2007).

Research on leadership in projects is exceptionally important as projects are becoming more widespread in today's organizations and project management is being recognized as a profession (Lindgren & Packendorff, 2009). To gain new external and tacit knowledge in the form of research, development is linked to irregular innovation and change, which is called exploration, and gaining current and overt knowledge is associated with incremental innovation and is known as exploitation

(Chebbi, Yahiaoui, Vrontis, & Thrassou, 2017); hence ambidextrous leadership becomes an important approach here as it consists of both exploration and exploitation .The leaders will have to design organization with the capability to do both (exploration and exploitation) to succeed now and in the future (Latham, 2014). Exploration is termed as radical innovation and exploitation, which is incremental innovation (Raisch, Birkinshaw, Probst, & Tushman, 2009), which can be performed at the same time by an ambidextrous leader (Mom, Van Den Bosch, & Volberda, 2007).

Although few studies on ambidextrous leadership have been carried out in the past, its effect on organization and its specific consequences are yet to be explored (Avolio, Bass, & Jung, 1999; Vera & Crossan, 2004; Zacher & Wilden, 2014). This study contributes towards a novel understanding about the importance of ambidextrous leadership in successful completion of projects resulting in positive organizational outcomes as a whole. Prior research only focused on relation between ambidexterity and performance such as environment dynamism (Rothaermel & Alexandre, 2009) and resource endowment (Cao, Gedajlovic, & Zhang, 2009).

Organizations outperform their competitors consistently if they have sustainable competitive advantage that is a unique position relative to its competitors (Porter & Advantage, 1985; Trong & Tuan, 2017). To gain this competitive advantage, organizations need innovation to compete with competitors using new technology, pressure exerted by global competition and dynamic environment. The organizations will not stay in the market for long if they do not innovate (Dess & Picken, 2000).

Innovation represents two things: the opportunity to grow and influence the direction of industry (Davila, Epstein, & Shelton, 2012). Innovation occurs when new ideas are developed, promoted and implemented by employees in work settings (Janssen, 2000). Significant attention was placed on innovation by researchers in the past (De Jong, Parker, Wennekers, & Wu, 2011). Innovative behavior is termed as an employee's extra role behavior and when this behavior is exhibited in ever changing work environment, organizations are able to face dynamic challenges in the competitive environment (Katz & Kahn, 1978; Janssen, 2000).

Leadership has been believed to be one of the important factors that affect employee innovation and creativity (Müceldili, Turan, & Erdil, 2013). The connection between leadership and innovation has been gaining interest of researchers lately and some researchers insisted that the key predictor of innovation is leadership (Rosing, Rosenbusch, & Frese, 2010; Purvee & Enkhtuvshin, 2014; Jansen, Vera, & Crossan, 2009). Among the different leadership behaviors, the effect of transactional and transformational leadership has been studied more often (Purvee & Enkhtuvshin, 2014; Rosing et al., 2011).

Leaders play a vital role in facilitating and sustaining the development of creativity and innovation. Leaders can encourage employee's innovation through making creativity a part of job requirement, providing progress on creative goals and reward employees on achieving outcomes that foster creativity (Stobbeleir, Ashford, & Buyens, 2011). Complexity is increased by innovation because the leader needs to engage in a variety of conflicting activities (Bledow, Frese, Anderson, Erez, & Farr, 2009). Innovation should be supported by leaders among the followers and they should strive to make the business more efficient at the same time (Bledow, Frese, & Mueller, 2011). In ambidextrous leadership approach, complex and often diverse roles that consist of innovation are managed by a single person (Rosing et al., 2011, 2010; Zacher, Robinson, & Rosing, 2016; Zacher & Rosing, 2015), therefore, they help and support employees in creating new and novel ideas (Sadegh Sharifirad & Ataei, 2012).

Organizations are relying more and more on project teams to accelerate innovation and generate competitive advantage (Wuchty, Jones, & Uzzi, 2007). Teams are defined as social systems comprising of three or more people (Hackman & Lorsch, 1987). Project teams are formed to get a particular task done within a given schedule (Lundin & Söderholm, 1995). One of the natural features that a project team faces is uncertainty (Meyerson et al., 1995). To help organizations achieve competitive advantage, teams must not only explore creative ideas but also exploit existing knowledge and use those ideas for their usefulness and feasibility (Liang, Shu, & Farh, 2019). The determination with the help of which people perform new and challenging tasks is influenced by self-efficacy; this means that employees

with high self-efficacy are certain that specific tasks can be learnt and performed. Hence, they keep on trying even when problems surface and on the other hand, employees who have low self-efficacy think that they won't be able to either learn or perform a different task and give up easily when they face a problem (Lunenburg, 2011). By reviewing the past literature on self-efficacy, it was concluded that an influential predictor of job performance is self-efficacy (Bandura & Locke, 2003).

Motivation and ability to engage in a particular task is influenced by self-efficacy (Bandura, 1977). Self-efficacy is essential and a necessary condition for creativity and finding new knowledge (Bandura, 1977). Self-efficacy is strongly correlated to superior performance and directly related to research productivity (Taylor, Locke, Lee, & Gist, 1984). Teams are effective if members of that team have a strong feeling of self-efficacy among themselves (team-efficacy: confidence among team members that they will be successful in performing the task) (Lindsley, Brass, & Thomas, 1995) and it is a strong predictor of individual goals and task performance in teams (Gully, Incalcaterra, Joshi, & Beaubien, 2002).

Literature proposes that self-efficacy plays an important role in increasing the innovation among employees, with the help of their strong confidence (Gong, Huang, & Farh, 2009; Tierney & Farmer, 2004). Typically, people who have high self-efficacy confidently face difficulties as challenge and set high standards with more efforts to attain challenged goals themselves (Michael, Hou, & Fan, 2011). Employee creativity is related to both creative role identity and self-efficacy (Farmer, Tierney, & Kung-Mcintyre, 2003). If managers provide their employees with many opportunities for creative events, their firm's identity would develop as creative employees because employees who have high creativity have a stronger sense of role identity (Bandura & Locke, 2003).

1.2 Gap Analysis

Ambidexterity is considered as one of the emerging field of management research (Junni, Sarala, Tarba, Liu, & Cooper, 2015). Literal meaning of ambidexterity is the ability of a person to write with both hands but according to management, it

is considered as the competence of balancing the contrasting activities of exploration and exploitation (He & Wong, 2004). As the emerging body of literature describes on various theoretical perspectives, an important field has come into view that stresses on the role played by a leaders in the development of ambidexterity (Gibson & Birkinshaw, 2004; Nemanich & Vera, 2009). However, this stream of research still lacks substantial empirical research.

Significant attention has been placed on innovation by researchers for decades (Amabile, Conti, Coon, Lazenby, & Herron, 1996; Mumford & Gustafson, 1988). In most of the previous researches, innovation has been studies as an outcome of leadership (Bledow et al., 2009). Primary reasons for the relationship between leader and innovation are that innovation represents avoiding conformity thinking and taking risk by developing new ideas. Employees need to exercise autonomy to show innovation (Janssen, 2000). Autonomy and freedom of ideas are only possible when leaders provide support to employees (Amabile et al., 1996; Politis, 2005; Foss, Woll, & Moilanen, 2013). The impact of different leadership behaviors in organization innovation and innovation performance has been studied in the previous research (Purvee & Enkhtuvshin, 2014). Leaders are responsible for bringing change and guiding organizations; they can support innovation within organization and innovation performance (Jansen et al., 2009). In previous studies, the influence of different leadership styles on innovation has been studied and among them were behaviors displayed by transactional and transformational leadership (Rosing et al., 2011). The topic of ambidextrous leadership becomes specifically important as existing literature styles that are transactional and transformational leadership styles (Bass, 1999) turned out to be insufficient in acquiring the complex nature and pace of innovation. Secondly, the traditional leadership styles that were studied in the past were very rigid; therefore they could not support innovation (Rosing et al., 2011). It has also been proposed by (Bass, 1985) that greatest leaders are the ones who are both transformational and transactional.

Although there is no deficiency of theories defining leadership concepts yet there is little agreement on what constitutes effective leadership (Gordon & Yukl, 2004). Besides, it has been claimed by the researchers that single leadership style cannot

effectively promote innovation (Anderson, De Dreu, & Nijstad, 2004). Some researchers have tested innovation with supportive leadership (Montani, Boudrias, & Battistelli, 2015; De Jong & Den Hartog, 2008). Consequences of leadership styles on creativity has been studied in the past such as transformational leadership, empowering leadership, supportive supervision, transactional leadership and benevolent leadership (Rego, Sousa, Marques, & Cunha, 2012). However, not many empirical studies have investigated the relationship between innovation and ambidextrous leadership. Therefore, the aim of this thesis is to answer calls for more empirical research.

Ambidextrous leader suggests that a solo leader can accomplish by adopting both opening behaviors (idea exploration) and closing behaviors (idea exploitation) (Rosing et al., 2011; Zacher & Rosing, 2015). New idea generation is a part of innovation, therefore keeping in view the study of (Carmeli, Reiter-Palmon, & Ziv, 2010) this study proposes that ambidextrous leader enhances employee innovation in projects. It is important to study ambidextrous leadership impact on team innovation because there is still an overall paucity in literature and research that has been conducted on leadership in teams (Chin, 2015) and how leaders may promote ambidexterity (O'Reilly & Tushman, 2013).

As innovation is termed as a non-routine behavior, therefore traditional methods of job are avoided by employees and they explore and implement new work means at work setting. Increasingly, there is a need for research that focuses on ambidexterity at employee level (Caniëls & Veld, 2019).

Various researches have been done in the past that focuses on different variables that contribute to innovation. Such as HRD interventions (Sheehan, Garavan, & Carbery, 2014) and review (Anderson, Potočnik, & Zhou, 2014). A seemingly less studies area is that of the significance of the human factor of self-efficacy in relationship to innovation (Brink & Erik, 2017).

It has been suggested by researchers that confidence in person's creative competence is compulsory for that person to perform creatively and if the organizations need to innovate, building employee self-efficacy for creativity is an important step (Tierney & Farmer, 2011). The result of this exploration contributes to the deeper

understanding of the importance of the human resource dimension in the innovation as called for by the research of (Meissner & Kotsemir, 2016). The lack of any substantial empirical studies using creative self-efficacy as moderator between innovation and project performance calls for filling this gap.

1.3 Problem Statement

Research on Ambidextrous Leadership and innovation is in initial stage. Ambidextrous Leadership is used as predictor particularly in the context of creative involvement, whereas, innovation is used as an employees' work outcome. Researchers stated that by using innovation, employees talk about new ideas, therefore they need high self-efficacy in showing innovation (Anderson et al., 2014). In addition, employees' high innovation shows more extra role behavior; therefore, they are more expected to perform well. These variables are studied in the literature; however they are not modeled together in a single conceptual framework. The present study is conducted to model these variables by investing how ambidextrous leadership affects project success with the mediating role of innovation and moderating role of self-efficacy.

1.4 Research Questions

Considering the project base organization in Pakistan, we focus on the questions that if the project scope is not defined properly, then how the abusive supervisor will impact the employee performance and after that performance what will be the impact of that performance on success of the in project, how scope creep will moderate the relationship between Abusive supervision and employee performance and how employee performance will mediate between the Abusive supervision and Project Success. Keeping the view on research model, our study will answer the following questions.

Research Question 1:

How does Ambidextrous Leadership impact Project Success?

Research Question 2:

How does Innovation mediate the relationship between Ambidextrous Leadership and Project Success?

Research Question 3:

How does Self-Efficacy act as a moderator between Innovation and Project Success?

1.5 Research Objectives

The objective of the research is to understand the impact Ambidextrous Leadership would have on Project Success. These objectives are broken down as:

Research Objective 1:

To find out the impact of Ambidextrous Leadership on Project Success.

Research Objective 2:

To investigate the impact of Ambidextrous Leadership on Project Success, mediated by Innovation.

Research Objective 3:

To investigate the effect of Innovation on Project Success, moderated by Self-Efficacy.

1.6 Significance

Projects can come to a stop in different circumstances due to insufficient profits for the clients and the business, or providing plentiful revenue even if they are carried out within time, budget and scope.

The present investigation will contribute to the Ambidextrous Leadership, Innovation, and Project Success in several important ways. First, most of the previous

researches which studied leadership styles for innovation are servant leadership, authentic leadership, Charismatic leadership, transformational leadership and ethical leadership (Moriano, Molero, Topa, & Mangin, 2014); however, the relationship between ambidextrous leadership and innovation is the new contribution of the current study. Second, the indirect effect of Ambidextrous Leadership on Project Success through innovation is further a new contribution of this study.

The other relationships which are focused in this research have been examined before in other contexts but have either inconsistent existing results or are not significant enough for assurance of their generalizability in organizational context. The current study contributes to the knowledge in a new way, by exploring the moderating effect of self-efficacy in the above mentioned framework. The individuals with high self-efficacy are to show greater tendencies towards innovation than the people who lack self-efficacy. Self-efficacy is the confidence of an individual in his/her ability to develop novel ideas and bring innovation in the organization (Yang & Cheng, 2009).

In addition, this research has significant managerial implications. This model will likely help management to better comprehend how self-efficacy helps bring innovation in the organizations, and how with the help of innovation, project success can be enhanced and ultimately, how creative self-efficacy moderates these relationships in Pakistani organizational context.

1.7 Underpinning Theory

Several theoretical perspectives have been presented by different researchers, which are used worldwide to support the studies of leadership and project success.

Theory which is supporting all the variables of the current study and linking those variables directly and indirectly to each other is the "Social Learning Theory" given by (Bandura, 1986). Social learning theory states that people do not simply react to external influences, but instead they select, organize, and transform reactions caused by external influences. Social learning theory emphasizes learning because of the events occurred in the past as well as learning by consequences.

An important aspect of this theory is that it actively recognizes the part of cognitive processes as a vital part of behavior change. Social Learning Theory particularly recognizes that most human behavior is learned by observation through modeling. A person develops an idea about how behaviors are performed and the effects they produce through observing others. This coded information helps as a guide for one of the dimensions of a leader to react, i.e. Ambidextrous Leadership either gives a go ahead to exploit the opportunity or holds back.

Behavior learning in an organization can randomly be distinguished between two types: one of them is training and the other one is the day-to-day relationship between manager and employees. As Ambidextrous leader encourages employees to break up rules and search for solutions outside the safe ground leading the projects to be successful. The aim of this study is to find out the importance of Ambidextrous Leadership on Project Success using employees to explore and/or explore according to the need of the environment.

Chapter 2

Literature Review

2.1 Ambidextrous Leadership

Literal meaning of ambidexterity is the potential of a person to make use of both hands with no difficulty. An ambidextrous organization is one that can exploit a business and, at the same time, explore a new one without its main operating activity suffers. According to Canonico et al. (2013) being ambidextrous by birth is rare, however it can be learned. For companies the same thing can be done, but very few organizations are ambidextrous.

The concept of the ambidextrous organization, which is based on mutual support and market confidence, arises from March's approach, on the contradictory conditions implied by exploration and exploitation learning, of the Human Resource of the organization that learns to make the organization ambidextrous. It is important to create a management team supported by organizational leadership, which implements planning for transformation scenarios in evolutionary leadership under the processes associated with cognition and tolerance of contradictions of the organization that makes ambidextrous organization. Moreover, exploration learning and exploitation learning are affected by external factors which include competitive environment, dynamism of organizational design, strategic factors, corporate, diversification and growth strategies pursued by the organization (Turner, Maylor, & Swart, 2015).

This concept was first introduced in 1976 by Robert Duncan in his book. The term ambidextrous is referred as a dual structure used by organizations in managing the actions that require various time horizons and capabilities (Prange, 2012). However, when this concept is discussed with reference to organizational learning, ambidexterity is considered a trade-off between exploitation and exploration (Duncan, 1976).

The ambidextrous organization can simultaneously exploit existing capabilities (exploitation) and explore new opportunities (exploration). Therefore it expresses a range of resources and abilities suitable both to manage current success and to lay the foundations for future success. It manages to govern efficiency and innovation. Today the design of the organization makes it mandatory for the management to identify new solutions for a problem that emerges in ever more pressing terms and with which they continually confronted while operating in their respective markets. To manage the present and lay the foundations for future success, the organization's design must reconcile objectives that appear to be in contrast with each other, but by using the dialectical comparison, companies can ensure their success in the long run successfully (Agostini, Nosella, & Filippini, 2016).

Ambidexterity is a broader concept that that has three different types of it. These types provide solution to the problem on organizational level of balancing the concept of exploration and exploitation. It includes structural, sequential, and contextual ambidexterity. Each of the type of ambidexterity has been distinguished from each other and explained below:

Structural ambidexterity is a simultaneous approach that has autonomous subunits that separates the department of exploration and exploitation structurally, and independently from each other. This type of ambidexterity is also known as the architectural ambidexterity that broadly focuses on the separate structures of both the departments (Huang & Kim, 2013).

Sequential ambidexterity, on the other hand, involves shifting of the organization between both the structures of exploration and exploitation. This is done to align the structures with the organizational strategy. However, this shift is temporary

that allows the organization to quickly adapt to the changes (Goossen, Bazzazian, & Phelps, 2012).

Contextual ambidexterity, third type, aims to solve the tension created between both the concepts, at individual level. Contextual ambidexterity supports the use of judgments by individuals to pursue towards exploration and exploitation simultaneously in an organizational setting.Contextual ambidexterity is quite different from the other two types as it takes in account the individual judgment in order to better adapt and align the oriented activities within an organizational unit (McCarthy & Gordon, 2011).

Hence, an individual in organizational context plays an essential role in this type of ambidexterity. Thus, it is defined as processes, beliefs and systems that help to shape the behaviours of an individual in an organization. There are few empirical researches found related to both individual and group level of contextual ambidexterity (Meglio, King, & Risberg, 2015).

The phenomenon of leadership, like many other phenomena that arise in human society, is so complex that the scientific concept of it obviously cannot be made clear and simple. Whereas, the words "leader" and "leadership" appeared in natural language long before the emergence of a scientific concept of leadership, which means that they carry many meanings, of which researchers try to choose only uniquely coinciding with the scientific understanding of leadership (Allio, 2013).

Moreover, in different languages there are different words that more or less accurately express this concept. If we look at the history of the word "leader", it turns out that it was originated from the West German word called "laithjan", and it was gradually changed in to English verb "lead", and then, approximately in the 13th century, it was changed into a noun a "leader" or "one who leads".The word a leader began to be used to designate military leaders - combined-arms commanders (troop leader), generals (military leader), and naval commanders (flotilla leader) (Northouse, 2018).

Since the United Kingdom has been a maritime nation, gradually the word a leader began to be used to denote a person who is paving the course of the ship (or a

whole fleet), and a military vessel (ship), who heads the "order", i.e. a group of ships moving in a certain order. Gradually (at the level of everyday observations) it became clear that, on the one hand, there are certain characteristics necessary for a leader, and on the other hand, becoming a leader, a person takes a certain position, which determines the entire system of his/her relations and activities. This value - "the position of the leader" - in the 19th century was expressed in the word "leadership"(Nohria & Khurana, 2010).

It is said that leaders do not lead by what they say, but by what they do, because it is their example that causes the rest of the organization to follow them. It is also stated that "crises create leaders", because in those moments unity is favored, especially when there is an external threat or when times are more difficult, and a person capable of taking command and transmitting security to the team is required (Trong & Tuan, 2017).

However, leaders do not improvise, because beyond the fact that some people have more innate soft skills, to exercise positive leadership it is necessary to learn to cultivate those skills and contribute to the values of the company. That is, a "kit" of technical or hard business skills and adaptive skills or soft skills is required. In the opinion of (Ahlers & Wilms, 2017), "ambidextrous" leaders were considered to be the leaders of the future, because they will be able to manage the contradiction, that is, they will have the ability to find balance, which means that far from the competition/cooperation dichotomy that were believed to be incompatible, the good leader of the future must handle both variables with expertise and use each one in due course.

But it is also important that they be able to guarantee the sustainability of resources, that is, that they promote responsible leadership to avoid the mistakes of yesteryear, when some too ambitious leaders created strategies that were at the limit of ethics and legality, which it implies at the same time having the ability to change the mentality of avid investors for short-term results. Leadership is also the fundamental challenge to overcome the requirement of the highly competitive environment, in which the increasingly globalized companies carry out their work today (Mueller, Renzl, & Will, 2018).

This implies having a good leader who must be both imaginative and innovative and with a long-term vision, because within the current environment of technological innovations is where new opportunities arise daily. Today more than ever, organizations must be adaptive and led by visionary, optimistic and above all committed executives. In this way, their teams will perceive the passion of their leaders, who will set the tone and define the way forward (Meglio et al., 2015).

2.2 Ambidextrous Leadership and Project Success

Although the idea of ambidextrous leadership has come into view recently, its concept has been vital in theory of leadership from the beginning (Avolio et al., 1999; Rosing et al., 2011). It was noted by Bass (1985) that effective leaders should be able to adopt the necessary leadership behavior which is in accordance with the particular situation. A great leader can decide what type of leadership behavior is suitable for which situation and exhibit high amount of transformational and transactional behavior according to the situation (Luo, Zheng, Ji, & Liang, 2018).

The aim of research on leadership has changed drastically during past few decades. First, the focus shifted from stable leadership to adaptable and flexible leadership and after that to leaders dealing with change that is defined by path goal leadership theory (House, 1971). Then attention shifted from traditional leadership styles to leader member exchange theory (Graen & Uhl-Bien, 1995). Other theories included transactional and transformational leadership.

Term ambidextrous leadership implies that leader is able to balance transformational and transactional leadership as the situation prevails (Voigt, 2014). An ambidextrous leader uses transformational leadership when he is faced with a dynamic environment and uses transactional leadership when he faces stable environment (Bucic et al., 2010). Traditional form of leadership is symbolized by transactional leadership (Burns, 1978). It refers to the trade that takes place between leaders and followers whose purpose is to meet their self- interest (Bass, 1999). The focus

of transactional leader is to maintain and ensure that day to day operations are performed as efficiently as possible. On the contrary, transformational leaders are imaginative and passionate; they function without considering their self-interest and perform to promote learning that is adaptive according to the need (Argyris & Schön, 1978). Transformational leaders work hard to bring change within the organization to shape it into something different. It is described as magnetism, motivation and individual consideration (Hsu, Bell, & Cheng, 2002). An ambidextrous leader is capable of switching between transformational and transactional leadership, as per the need and situation at hand (Zacher et al., 2016).

Different studies related to transactional, as well as transformational styles of leadership significantly relate to the concept of ambidexterity and innovation. The study of Giltinane (2013) can be taken as an example that highlighted the contingent relationship, combination and use of various styles of leadership that can be utilized as a possible method by the leaders in their organizations to become ambidextrous. This also raises the question for various leaders which is associated with how they can evaluate, outline and contrast transactional and transformational styles of leadership in such a way that enables them to implement the concepts and important principles of ambidextrous leadership.

The transformational leadership is one that has as its central axis people to achieve a change in the company. This type of leadership is based on the trust, respect and admiration that employees feel towards the figure that have the authority (Pieterse, Van Knippenberg, Schippers, & Stam, 2010). This current of thought was originated and introduced by historian and political scientist James MacGregor Burns and developed years later by the Doctor of Psychology Bernard M. Bass. Both experts in leadership studies worked on this leadership model in which the role of the leader was assumed by a profile focused on the participation of their employees and their motivation. In their studies, they described a series of qualities that identified a type of leader who was committed to the commitment of workers and to the objectives of the company (McCleskey, 2014).

In this way, the involvement of employees with the company's projects becomes

greater, which helps them to complete the project more effectively. Both authors describe individuals characterized by a strong vision of the future, having strong personality as the ideal people to become transformational leader in order to change the expectations and motivations of employees, as well as lead the progress within a company. In short, it is a leadership typology that is viable when leaders or authority figures and employees work together to achieve a higher level of motivation and results. A transformational leader accepts the change in the organization. On the one hand, he/she seeks to adapt to new market challenges and, on the other, he/she assume the risks that come with adapting to the needs of the market. However, these types of leaders are aware of these dangers but are not afraid to face them and overcome them. Empathy and the ability to communicate easily with others are two most common skills of these types of leaders (Wang, Oh, Courtright, & Colbert, 2011).

Due to these capabilities, transformational leaders do not stay away from the rest of their team, and the employees show a greater respect for them in the company. A transformational leader is committed to values such as creativity as they are essential aspects for generating ideas and improving results in any company. In fact, they not only encourage these values, but rewards the employees who utilize them, since they are fundamental for change. All this framed in an open environment of participation and dialogue. Transformational leader is usually considered as a role model among employees (Rou, Baker, & Rose, 2014).

Because the transformational leader stands out for his/her communication and leadership skills, the employees doesn't usually question the authority or the decisions that the transformational leader makes. Transformational leader trusts, without any doubt, the members of his/her team and focuses on improving their strengths (Pieterse et al., 2010). Likewise, he/she maintains a constant feedback of the work the employees do and acts as an indicative figure when there is any problem. Perhaps one of the most important skills or characteristics of this type of leadership lies in the constant work of motivation that this figure exerts on the employees. Transformational leaders know in depth their employees, their strengths and weaknesses, and know how to motivate them to achieve success. They also

believe in positive reinforcement as a way to encourage their team and share the company's success together (Odumeru & Ogbonna, 2013).

In transformational leadership it is characteristic to find inspiring leaders. This type of leadership focuses on processes of change and improvement within the company, as the team is encouraged to achieve spectacular results (McCleskey, 2014). This leadership is characterized by different aspects. The most important characteristics of transformational leadership are:

- The human capital of employees is valued. That is, employees are no longer seen as simple instruments that help the company earn money.
- In line with the above, the motivation of the employees will be greater, they feel that their skills and abilities are necessary in the organization, and that the good results achieved are thanks to them.
- Transformational leadership allows direct and trustworthy links with the team.
- Long-term growth is sought
- Some of the advantages of transformational leadership are:
- Learning and training tools are provided for employees.
- Employee turnover remains lows
- The leader sets an example to the entire team, helps and corrects their mistakes before blaming anyone.
- The work environment is more relaxed and pleasant, because there is no pressure from senior management.
- The self - esteem of employees is very important when it comes to transformational leadership, and this will be high.

Transactional leadership utilizes the processes of exchange (i.e., transactions) to control their employees, by asking them for their services, and in turn, rewarding

(or punishing them) if they effectively (or fail to) perform their duties. The key elements of this leadership style are supervision, organization and performance of the group. This type of leadership is highly effective in the situations of crisis situations under a given project that requires strict adherence to the rules and policies of the company (Pieterse et al., 2010).

Transactional leaders focuse on specific processes rather than ideas, and they utilize contingent rewards to praise or motivate their employees when established objectives are accomplished by them. They also use contingent penalty (contingent negative reinforcement) such as suspension when employee's performance is below standards. Their characteristics include: Compliance with specific tasks and problems; Rewards for achieving objectives; Punishments for low yields; limited scope for the staff to participate in the decision making process; high focus to maintain stability or status quo; and constant emphasis to improve performance (Odumeru & Ogbonna, 2013).

Within the context of hierarchies in the Maslow pyramid, transactional leadership is implicit in the most basic satisfaction needs. This is because the leader pays detailed attention to the fulfillment of specific tasks, rewarding the employees with basic needs, security and self-esteem, but the same mode can be used for punishment by suppressing the satisfaction of these needs until the problem is solved (Liu, Liu, & Zeng, 2011).

Leader must be ambidextrous in a competitive environment (Tushman & O'Reilly, 1996). They should be capable of implementing different ways in which employees can act, such as exploration and exploitation, incremental and radical and flexibility and control, simultaneously (Vera & Crossan, 2004).

Transactional leadership highlights structure and routine and is suitable for implementation when the aim of the organization is to bring back and re-establish stability and the organization itself is in a steady position; on the other hand, transformational leadership is suitable for the organizations when they come across complex, evolving situation and organization learning is necessary to be adaptive and progressive (Ramburuth, 2010).

In reality, organizations are hardly in one phase or the other. Competitive environment does not give them the comfort of choice, therefore they must move back and forth or adopt both styles of leadership simultaneously, i.e. Ambidextrous Leadership. Ambidextrous as organizational concept has been previously defined in literature. It was initially introduced as organizational ambidexterity by (Duncan, 1976) in the context of the dual organization structures.

Organizations can exploit their current assets with the help of ambidexterity and can explore potential opportunities at the same time (Alghamdi, 2018). Exploitation deals with refining the organization, efficiency, selection and implementation and on the other hand, exploration deals with search, variation, and experimentation as well as discovering new ideas (Ketkar & Puri, 2017; Birkinshaw & Gupta, 2013).

According to the above definition, organization has to deal with efficiency and flexibility (Adler, Goldoftas, & Levine, 1999) and alignment of existing resources at the same time. With the help of this, they are able to adapt according to the changing environment (Gibson & Birkinshaw, 2004).

Ambidextrous Leadership Theory suggests that those leaders who practice ambidexterity use opening behaviors that support such behaviors which are explorative in nature, secondly they use closing behaviors that promote exploitative behavior and the power to switch between both behaviors once a situation entails (Rosing et al., 2011). Opening Leadership behavior consists of a leader's behavior that increases difference in behavior of employees by providing them with support and encouraging them to think out of the box and experiment and providing them with autonomy to plan and execute (Rosing et al., 2010).

Thus, Ambidextrous Theory of leadership suggests that exploration activities are a result of opening leadership behaviors. Opening behavior is explained as group (set) of leader behaviors that motivate employees to try out and do things in a different way, support them to think and act freely and challenge established approaches (Rosing et al., 2010).

Closing leadership behavior consists of leader behavior that reduces variance in subordinate's behavior with the help of taking corrective measures, provide precise

guidelines and supervise in attainment of goals. Thus, Ambidextrous Theory of Leadership suggests that exploitation activities are a result of closing leadership behaviors (Zacher & Rosing, 2015). Closing behavior is explained as a group (set) of leader behaviors that involve correction of actions that were unsatisfactory or did not fulfill the requirements, giving detailed instructions and monitoring goal achievement.

By merging the discussed categories of leadership behaviors, ambidextrous leadership is termed as the capability of a leader to promote both explorative and exploitative behavior in followers by escalating or decreasing discrepancy in their behavior and flexibility by switching between those behaviors. This means that an ambidextrous leader provides support to their followers in effort to be ambidextrous (Rosing et al., 2011).

It is often observed that doctors rush toward the patient's relatives and claim that the operation got successful but unfortunately the patient died. In Malaysia, a shopping mall was planned to be completed within 12 months having an estimate value of RM 100 million. This was eventually stretched to 15 months and the budget was increased by RM 46 million. However, the developer rejected RM 26 million out of it (Mir & Pinnington, 2014).

This project marked to be a complete failure as "iron triangle" factors of cost, quality and time. Despite its failure, it was recognized as a perfect place to trade by the tenants and the shoppers. This raises a question that what factors actually contribute in making any project successful? Most companies aim to achieve organizational objectives through project approach. It has become difficult to distinguish between the project success and the project management success. The success of any project has become challenging by an increased competition (Papke-Shields, Beise, & Quan, 2010).

There is a familiar French proverb that says: "Nothing is as successful as success." But it is difficult to get the desired benefit if success is not defined, measured and built. Most companies find it difficult to identify the criteria that determine a successful outcome in the projects. This is because, even today, many business entities do not have the key to make a project succeed in its entirety (Davis,

2014). One of the realities of today, though highly unlikely, is that there is no global consensus for the definition of "Project Success", since the vast majority of companies do not take it into account and therefore do not apply it, which makes its determination and implementation more complicated (Müller & Turner, 2010b).

In general, Yang, Huang, and Wu (2011) stated that the success of a project is measured in terms of meeting its goals for both cost and time. Although there are additional aspects to take into account such as compliance with the project specifications, if it succeeded in the market or if it has provided the company with the understanding for future projects. The project manager is always keen to bring the project of a company to a successful conclusion by avoiding its failure. Successful implementation of projects is an important condition for a successful career as a professional project manager, as well as almost any manager responsible for organizing certain projects in the organization. A factor is considered to be a fact, an influence, or a circumstance that contributes to a result. Critical success factors, however, are the circumstances that help to establish project results. Hence, they help a project manager to engage himself in the success of the project. In other words, they are defined as the components needed for project management. Without the presence of such factors, a project tends to fail.The critical success factors (FCE), aim to help the planning of the activities and resources of any organization, facilitating the assignment of priorities within it (Trkman, 2010). This practice implies, for its realization, the following basic points:

- Defining the overall objectives of the organization.
- Defining a unit of measure to evaluate the functioning of the organization with respect to those objectives.
- Identifying the key factors that contribute to that operation.
- Identifying cause-effect relationships between objectives and key factors.

The success of a project means that all project stakeholders obtain results that meet their expectations, formulated in the form of goals and requirements. The

project manager, at the beginning of the project, is required to clearly understand the expectations of key participants and the indicators for which the conclusion about the success of the project will be formed, and during the project implementation, he/she is also responsible to monitor and predict the status of these indicators (Bucero, Randall, et al., 2015).

A project is considered successful when it is completed in time and under its provided budget and the requirements specified in the scope are met appropriately. There were times when the success of the projects were only measured by traditional criteria. However, currently, the criteria to measure the value of the investment (VOI) and not just the return on investment (ROI) are often utilized to measure success of the project (Lechler & Dvir, 2010). This also includes the alignment of project with the strategy of the company, the evolutionary capacity of the solution, the proper use of new technologies and everything related to corporate social responsibility. Most of the times, the realization of a project is derived from the tactical application of the strategy that has been defined in the company. It is therefore critical that in the execution of the strategies associated with the project, other factors are taken into account by taking a medium-term vision, which also includes giving appropriate consideration to the needs of all stakeholders involved in the project (Joslin & Müller, 2016). However, the researchers do not agree upon a common success criteria (Jha & Iyer, 2006) because project success can be affected by a variety of variables such as inside environment of the organization and situation in which project is operated and these variables can affect both end result and success of projects (Papke-Shields et al., 2010).

Over the years these three criteria time, cost and quality also known as Iron Triangle have been criticized because they seem insufficient. Some researchers say that they are too much while other say that they are incomplete (Yu, Flett, & Bowers, 2005). Researchers added more variables to the criteria that were traditionally set by exploring variables that had an impact on project success and others concentrated different criteria to one evaluation criteria, i.e. financial criteria (Yu et al., 2005). Some researchers adopted the following performance evaluation criteria of projects i.e. Developing quality reputation, maximize revenue and keep detailed

record, increase staff competence and increase productivity (Jugdev, Mathur, & Fung, 2007).

Another model for project success was presented by (Turner & Müller, 2006) that consists of following criteria:

- Project achieves its purpose
- End-user satisfaction
- Projects' self-defined success criteria
- Customer satisfaction.
- Performance in terms of time, cost, quality
- Supplier satisfaction
- Team satisfaction
- Reoccurring business
- Other stakeholders' satisfaction
- Meeting user requirements

Success may be referred as a favorable outcome. The criteria of any success is a turning point for evaluating things. Hence, project success is a multi-dimensional, inclusive, and ambiguous concept. Previous literature refers project management as a success against the triangle of objectives, that is, time, performance and cost. Success of project has always been centered by these factors until modifications arose to include users or consumers. The scope eventually got changed of not disturbing the organizational culture and the main workflow (Müller & Jugdev, 2012).

However, project attention is also referred as threefold that involves performance requirements, cost and schedule. Thus, it is mentioned as a primary role of the project management. Both the older and newer ideas of project success have

not reached to finalize the actual idea. Previous view of project success, that is, time, quality and cost is quite narrow that is shifted to wider strategic outcomes. Hence, they are the opportunity for the companies to learn to sustain and a source of having competitive advantage (Tmeemy, Rahman, & Harun, 2011). Because of the complex nature of concept of project success and lack of agreement among researchers, the most used criterion in success is still the iron triangle (Papke-Shields et al., 2010). Iron Triangle is still the criteria for appraising the performance of project (Agarwal & Rathod, 2006).

Whether companies require organic growth in new markets, or they need to expand through developing unique products, services or business models, or expand through acquiring and partnership: companies come across the need to find and combine new resources, realign existing one and reconfigure basic design features to tackle the increased size and complexity that come with the fast growth. These growth scenarios present different leadership challenges but if a leader is able to overcome these challenges, it can make a considerable difference in organization's effectiveness (Mohrman, 2007).

Organizations have to adopt exploration and exploitation simultaneously to meet the challenges and difficulties that come with the disruptive change (March, 1991). Organizations exploit the information that is in hand to make sure that the project is successful in short period and explore novel information and new possibilities, opportunities so that the project can achieve success and prosperity in the future (Chen, 2017). Ambidextrous leadership is an important factor in the accomplishment of organization goals venturing into highly developed economies (Chebbi et al., 2017). Similarly, pursuit of both exploration and exploitation results in superior firm performance (He & Wong, 2004; Raisch et al., 2009).

It is quite commonly observed that several projects fail or may not be able to perform well because of lacking in the tools and techniques of project management. This marks the importance of people in project management (Müller & Turner, 2010a). Since most people involved in project management are the stakeholders, they are the most concerned towards its success. In other words, people are the ones in project management who set project plans, goals, organize, monitor

and direct the project activities. It's usually that they get involve along with organizational and their interpersonal skills to explore the relevant solutions for the problems. Hence, leadership is extremely essential in project management (Burke, 2013).

Having a process of developing a high performance team is essential in delivering the project success. Thus, project leadership is having a skill of influencing people to acquire the team objectives. Leadership is all about setting a vision to achieve the project objectives by having a capability to influence other team members. Effective leadership in project life cycle helps to ensure that the focus stays towards the project goals (Lundy, 2013).

Project leadership is about much more than meeting the scope, time and cost of a project. It is about generating value for the customer and the environment. The first difficulty lies in the different interpretations that the concept of value has for each interested party in the project (stakeholder).The looks and needs of each role are different and one of the first challenges to face is to understand these needs and try to create consensus among the main actors, and then inspire them to walk in this direction. This is more complex than learning to use software to make schedules (Clarke, 2010).

According to the report of Anantatmula (2010), more than 70% of executives believe that developing leadership in their teams is a critical success factor. Some basic aspects such as integrity and congruence remain an inherent part of leadership, but other characteristics and behaviors have changed in this dynamic, multigenerational, didactic, global and electronic environment. It requires a leader who knows the subject, strong but flexible, good listening, clear and concrete and very charismatic to inspire young and old, experienced and novice. It is impossible to define a model applicable to all cases (Barnwell, Nedrick, Rudolph, Sesay, & Wellen, 2014). However, according to a Deloitte Business Confidence Report 2016, some characteristics of today's bold leaders are:

1. They propose controversial ideas

2. They take risks, sometimes much more than the general of their environment.

3. They build strong teams and empower, delegate and develop their collaborators.

4. They promote communication and feedback in multiple senses of relationships.

5. Set challenges

Müller and Turner (2010b) stated that the leader must be a facilitator, a developer of people in an organization that wants to grow and have the best talent. This type of leadership requires a work environment very different from the traditional.

In the world of projects, constant progress is made in the use of tools, in the development of skills of project leaders and techniques to achieve successful projects. A genuine interest in learning about new ways that optimize the use of resources, which are increasingly scarce, and mainly that ensure the achievement of project objectives, begins to be perceived in the work environment. This culture of efficiency is not easy, nor common, nor is it built overnight, but if it does not begin with blunt actions, it will never be a near reality (Barnwell et al., 2014).

Companies and people today show a greater interest in learning or improving the execution of this profession. To do this, the first step, as in any learning, is to declare that I don't know. The declaration of not knowing at the organizational or personal level, indispensable in the learning process, is not a simple step to take. An experienced project leader has knowledge of great value and, if he is able to identify some aspects to improve, he will be able to strengthen those that do work for him and adjust those that he lacks. This is learning, it is not about starting from scratch, but about integrating and adjusting new experiences (Lundy, 2013).

The leader is expected to know the best practices in project management to develop a project plan that describes the scope of the project, roles and responsibilities, with a budget and a schedule with an acceptable accuracy for the degree of risk the project has. The successful project leader makes the document and, most importantly, seeks to create business value using it to negotiate and reach agreements, ensuring that the main sponsors, clients and team members know

and accept it, while a business leader of a common project makes the complete document, but in his/her office alone, to deliver it to the PMO and comply with the methodology (Lee, Gillespie, Mann, & Wearing, 2010).

Burke (2013) stated that a successful leader uses his own controls to report progress, investing little time in reporting. Report reality on time, whether pleasant or not, and very concisely ask for help when you need it. The common leader assigns someone two days a week to prepare the well-presented report, trying to avoid bad news to the fullest, thinking that he can correct the problems the following week. The successful project leader invests time with the team explaining what will be done and agreeing on the way and time it will be done, strengthening learning and commitment. The common project leader communicates the plan to the team at a meeting and is made available in his office if there are doubts.

Yang, Huang, and Hsu (2014) stated that a successful project leader is partly responsible for the interpersonal relationship of his team. A project being a temporary effort, the period to generate and strengthen relationships is generally short, and takes advantage of it from the beginning. Look for face-to-face meetings whenever possible and establish rules of coexistence, adjusting them as necessary, seeking to build trust and commitment. The common project leader believes that team integration is the responsibility of each member. The successful leader also considers part of his/her work to recognize the effort, not only until the end, and to celebrate with his team the achievements and learning in a cheerful, prudent and respectful way. He/she does it with pleasure and people notice. The common leader prefers to keep his distance to avoid losing authority and congratulates by mail or in private from time to time (Barnwell et al., 2014).

Packendorff, Crevani, and Lindgren (2014) argued that a leader should not be the person who constantly goes "putting out fires" and that planning is the key to project success. In all situations, the leader of a project must be a kind person, but with authority; occupied in the identification of factors that represent a risk or opportunities so that it can mitigate and, consequently, can minimize damage to both the equipment and the project. It requires a leader to be "alert" and anticipate the aspects according to his/her priorities.

To achieve firm's superior performance, projects need to be delivered in time, within budget and according to required quality. In today's global environment, to deliver projects within time and budget, process, people and technology used by information system project need to exhibit rigor and agility, i.e, Ambidexterity (Lee, DeLone, & Espinosa, 2007). If leaders fail to deliberately supervise projects that are vital to the organization's success, the competitive growth of a business will be affected (Rauniar & Rawski, 2012).

Organizational ambidexterity that is defined as the organization's capability to exhibit alignment and adaptability at the same time has been linked to enhanced organizational performance (Gibson & Birkinshaw, 2004). Similarly, ambidextrous coping strategies are used by project managers to lessen the adverse consequences of global boundary complexity on global project success (Lee, DeLone, & Espinosa, 2006).

Previous research also suggests that the projects required in software development and implementation also require ambidexterity, i.e. They should be flexible/agile and rigorous/ disciplined simultaneously so that they can tackle the challenges faced by projects occurring globally (Lee et al., 2007). For example, teams have to follow project coping approach in a disciplined and rigorous way and simultaneously, show flexibility towards rapid adaptation and reverse these approaches according to the need of the environment (Lee et al., 2006).

Other than software related projects, other projects such as engineering projects may face complex challenges .These projects demand both exploiting existing capabilities and exploring innovative solutions (Liu, Wang, & Sheng, 2012) to tackle with challenges.

Ambidextrous Leadership is essential for the projects to be successful. As the projects are unique in nature, they cannot be executed by using standardized processes only. Generating new knowledge is necessary along with standardized processes for successful execution of projects (Edmondson, 2008). This is in line with (March, 1991) research in acquiring new knowledge in terms of ambidexterity; exploitation (refinement of knowledge in hand) and exploration (formation of new

and unique way out). Based on above reviewed literature, hypothesis one has been developed:-

Hypothesis 1: Ambidextrous leadership is positively associated with project success.

2.3 Innovation as a Mediator

Innovation is a diverse terminology that has varied descriptions. It is defined as a reflection of outputs of a new market, new goods, new source of supple, new production method, and new organizational structure. It may also be known as production and implementation of new products, ideas, processes and services that involves creativity. It may be classified as a process, product or business model innovation (Drucker, 2014).

Innovation is termed as the deliberate opening and function within a role, group or organization, of thoughts and ways to achieve goals that are novel to the appropriate unit of adoption and are considered in such a way that benefits the individual, group or organization considerably (West & Farr, 1989).

A definition of innovation that is widely accepted calls it a comprehensive activity of creativity and implementation. Innovation may also be known as an intentional application in group or processes to adopt and design for a benefit of group, an individual, and even organizations (Kline & Rosenberg, 2010).

Innovation is a comprehensive category that involves production, assimilation, adoption, exploitation of markets, enlargement and renewal of products and services, and development and establishment of new models and management systems, hence, innovation is both an outcome and a process. These different views of innovation make it clear that innovation is something that goes beyond creativity. According to Anderson et al. (2014), innovation and creativity are considered to be essential in an organization's success. Despite the fact that innovation and creativity have some of the characteristics similar, there is a different approach to commercialization and implementation in both the cases that makes them different

to each other. This makes its scope limited in idea generation. Hence, creativity can be considered as a part of innovation. Thus, without having a commercial value, a creative venture is considered as an invention. The biggest factor to determine innovation is the product or service. Innovation is classified into following five various types, these are stated below:

1. An introduction of new good
2. An introduction to new production method
3. An opening of new market
4. An identification of half manufactured goods
5. A creation of new industrial organization

To be innovative, you have to come up with creative ideas and implement them. First stage consists of recognition of problem or a potential opening and coming up with solutions to tackle those problems or use the opportunity. For creativity, it is necessary to have explorative behavior (March, 1991). On the other hand, to implement ideas, exploitative behavior is necessary and it consists of evaluation of generated ideas, selecting from those ideas and finally implementation of those ideas.

First creative ideas that challenge and disturb the routine need to be developed, then inspected if they are worthy and practical and then promoted within a team (Farr, Sin, & Tesluk, 2003). Creativity is commonly explained as the formation of a novel unique product, idea or solution to a problem that is valuable to the individual or social groups (Hennessey & Amabile, 2010). Many researchers support this definition of creativity (George & Zhou, 2002; Kaufman & Pretz, 2002).

The principles of innovation are meaningful in organization's growth (Keeley, Walters, Pikkel, & Quinn, 2013). Most innovation models consider creativity and implementation as the two fundamental processes of innovation. However, these processes are related to exploration and exploitation actions. Exploration innovation generally seeks to create new technologies and products or services. On

the other hand, exploitation innovation focuses on maintaining established routines and enhancing the competencies. Exploration innovation are driven through activities such as experimentation, taking risks, variance, search, and flexibility whereas exploitation innovation are expedited by activities like, refinement, efficiency, choice implementation, selection, and execution.

The models of innovation used traditionally falsely present innovation as the linear activity that starts with creativity and ends on implementation. According to Baden-Fuller and Haefliger (2013), technological innovation is linked to business models. However, innovation's realistic nature is considered as cyclic that constantly demands a change to exploitation from exploration and implementation from creativity. Hence, both exploration and exploitation when combine are found to be crucial to innovative optimal performance. Engaging in high levels of exploration and exploitation and maintaining a balance between both the activities is known as organizational ambidexterity. On drawing the focus to one of such activities an organization observes risk of missing out the other's benefit. Researches demonstrate further that organizations are referred to as successful that achieve ambidexterity than the ones that fail to achieve. Several pitfalls and possibilities contribute to creation of model (Teece, 2018). There are several pitfalls of the innovation's linear model, they are as follows:

a) Innovation is recognized as an activity that initiates from generating ideas to the market according to most models. However, these models may fail to provide attention to the impulsive properties of an innovation process.

b) Another disadvantage is that many of the emotional components hardly get addressed that makes it responsible for many of the failures. Since R&D is closely related to manufacturing and science is considered as technology-oriented, there is less attention paid towards the behavioral and social sciences that may be involved in the process of innovation.

c) Even though there is a complex relationship between the emerging markets technological capability are considered as crucial components of innovation, the traditional models seem to fail in order to capture this.

d) Another shortcoming of the linear model is that the role of a leader/entrepreneur is not highlighted in traditional models. It becomes difficult for the leaders to find a balance between the exploration and exploitation activities with the interchanging need to get engage in creativity and implementation. Hence, a competing demand and tension on the firm's scarce resources contradict the entire process of innovation.

A shift from such linear models proposes a dynamic, cyclic and holistic model of innovation. According to (Balconi, Brusoni, & Orsenigo, 2010), linear model is considered as a rhetorical device. This shows a relationship between the soft world of altering concerns and needs and the hard world of altering technical capabilities. The model also highlights the essential role of an entrepreneur or a leader that has a concern in the elements of the innovation process.

Ribiere and Tuggle (2010), suggests that innovation models are no more instead cyclical. The CIM (Cyclical Innovation Model) portrays innovation as a circle of change with four different nodes named as: technological change, market transitions, product development, and scientific research. The system also carries cycles of changes that would influence each other by the dynamic processes. Hence, they correct, supplement and inspire each other.

It further produces a system that has cycles liked that causes high-order dependencies by influencing each other. Thus, a coordinated system having dynamic non-linear process that develops an interaction between alteration in science and industry and technology and market. The role of leader is considered to be pivotal in cyclical innovation model.

In teams, creativity is defined as the interface between team members and their surrounding environment (Sternberg, Kaufman, & Pretz, 2013). With the help of explorative and exploitative activities, there is great performance in creativity and its implementation. Exploration activities in creativity consist of risk taking, experimentation and discovery and need inherent motivation, a different thinking style and independence. Exploitation activities consist of refinement of production and efficient execution needs support of management and organization.

Exploration and exploitation are interdependent (Farjoun, 2010). Exploitation guarantees that there are enough assets with which exploration can be done and exploration makes sure that new processes and products are produced that can be exploited in future when necessary. It is suggested by researchers that the formation of novel and useful ideas, i.e, creativity (Amabile, 1988; Amabile et al., 1996) is vital for the survival and competitiveness of organization (George & Zhou, 2002; Oldham & Cummings, 1996).

It is found in previous research that when transformational leadership is provided by supervisor, employee creativity will flourish (Jaussi & Dionne, 2003). Transformational leadership influences subordinates by widening and elevating goals of followers and provide them with confidence such that they perform beyond expectations (Dvir, Eden, Avolio, & Shamir, 2002).

Research done in the past is in line with the requirement of a fresh perspective on leadership that supports innovation (Anderson et al., 2004). Practical research has confirmed that the most significant way to motivate employees towards innovation is leadership, however which specific leader behavior helps in contribution of innovation is still vague (Bledow et al., 2011).

Transformational leadership deals with motivating and directing employee efforts by inspiring and transforming them (Jensen et al., 2016). They encourage employees in such a way that they think beyond their self-interest for the sake of the organization (Antonakis, Avolio, & Sivasubramaniam, 2003). Transactional leadership is the opposite of transformational leadership and it develops a connection based on exchange by setting clear goals and recognizing achievement of goals and interfering when necessary only (Rosing et al., 2010).

Although leadership is measured as most important determinant of innovation, yet leadership can only result in successful innovation if it goes along with and accompanies mechanisms that encourage exploration and change, which clearly demand reactive solutions (Shalley, 1991).

Leaders have to bend their approach so that they are successful in influencing the efforts of individual employees and teams according to their knowledge of dual

aspect of innovation (incremental and radical). If employees are passionate for transformation and innovation, leader should not only support employees in doing so but also involve in balancing behaviors that result in creating stability. On the other hand, if tasks are performed by employees in streamlined and rigid way, the duty of the leader is to question the status quo by counterbalancing one sided focus of team (Bledow et al., 2011).

Ambidextrous Leaders are capable of increasing enthusiasm and passion among employees and simultaneously make sure that discipline is still there (Andriopoulos & Lewis, 2009). Leaders who follow ambidexterity are receptive to various inspirational challenges and adjust their approaches according to situation as team proceeds on a project. Leader needs to synergize balancing inspirational forces that are passion and obedience, rather than intensifying one at the price of the other. The ability to switch between transactional and transformational leadership styles is performed by ambidextrous leaders (Rosing et al., 2011; Zacher et al., 2016).

When organization is facing a stable environment and objective is to restore balance, transactional leadership is required. However, when organization is facing complex and changing environment, transformational leadership is more suitable. In reality, organizations are not able to choose between two styles because of the dynamic environment. They need to either move between these two styles or choose them simultaneously (Luo et al., 2018).

In such competitive environment, leaders must adopt an approach that is suited to the environment which usually demands ambidextrous leadership. The most important predictor of employee innovation is leadership (Bledow et al., 2011). Leaders should promote exploitation and exploration behaviors among team members because combining both behaviors results in high innovative performance (Rosing et al., 2011). Ambidextrous leaders not only compel employees to make efforts towards achieving innovation, but also direct and support them to pay attention towards efficiency (Havermans, Hartog, Keegan, & Uhl-Bien, 2015; Zacher et al., 2016).

To achieve superior outcomes, the competence that organizations need to build and develop is innovation (Damanpour & Aravind, 2006). Executives have become conscious of the complexity involved in achieving sustainable business (Boons & Lüdeke-Freund, 2013). The lifespan of firms have decreased because of threats of new entrants. Due to these reasons, innovation is important for sustainable and longer business operations (Brown, 2010). Innovation in business can guide towards sustainable competitive growth if it is well organized and deals with management behaviors (Hamel, 2006).

Leaders reinvented the way they get work done by innovating in processes, hence resulting in an increase in organizational performance (Damanpour & Aravind, 2012). When creativity is displayed by employees at work, outcomes are unique and out of the box responses that help in dealing with tasks at hand (Amabile, 1983; Amabile et al., 1996).

Employees may come up with new ways for accomplishing tasks that include identifying innovative products or services to meet the demands of customers. (J. Zhou, 1998; J. Zhou & Shalley, 2003). Creative response by employees may also include refinement of current procedures to enhance productivity or coming up with substitute procedures. Both of the responses mentioned above help employees in increasing their performance required in their designated jobs (Gong et al., 2009). The other approach is that the employees may come up with new, useful ideas also to develop their own work (Shalley, Zhou, & Oldham, 2004) resulting in improvement of the entire organization.

Due to dynamic environment, traditional organizational structures are shifting towards project based structures. Projects and innovations are found to be everywhere in our professional life and we live in a project society (Lundin et al., 2015). It is proven by previous research that if a project is done through innovative solutions and processes, it goes further than classic project management (Aubry, Lièvre, & Hobbs, 2010).

The contribution of work spent in projects is positively related to success in innovation and in return, innovation success is positively related to business success (Wald et al., 2015). Activities within projects are constituted, coordinated and

controlled with the help of project management (Blomquist, Hällgren, Nilsson, & Söderholm, 2010). Project management consists of tools and techniques that define how to execute projects on time, within budget and required quality (Morris, 2013) which are considered as criteria for a project to succeed. This approach is insufficient because of changes in the environment (Shenhar & Dvir, 2007). Projects have become explorative in nature (Atkinson et al., 2006) and therefore result in poor performance (Brady, Geraldi, Brady, Davies, & Nightingale, 2012). The projects are transforming from operative to creative (Mahmoud-Jouini, Midler, & Silberzahn, 2016). Therefore, exploration phase in project is important to allow requirements and specifications to emerge through trial and error as well as learning.

Researchers have pointed out that leaders who are innovative organize structures that are improved and processes that are better for project portfolios; they are more future oriented and proactive (devise techniques through which improved ideas are formed) and there is more inspiration among team members, they expect more innovative projects and are more experienced in dealing with ambiguity (Gemünden, Lehner, & Kock, 2018).

Over the past three decades, most research is based on transformational and transactional leadership. Both of these theories have shown positive effects in performance of firms (Laohavichien, Fredendall, & Cantrell, 2009). To achieve higher performance, leader should be capable of simultaneously exploring when necessary and exploiting when required (Hsu & Chang, 2007).

Past research suggests that the result of firms exploiting their resources results in increase in performance of that firm, and this positive effect on performance is greater if exploration increases and vice versa (Boumgarden, Nickerson, & Zenger, 2012). This means that to achieve greater performance, the firms need to perform both simultaneously. When firms highly involve themselves in exploration and exploitation with some balance, it acts as compliment in generating high-performance (Hsu & Chang, 2007).

Tight schedule acts as a limitation in projects. They require new activities in contrast to existing repetitive activities to complete projects within the given time

frame. This means that project's primary focus is exploration, whereas project management within organization focuses more on exploitation. Project management practices are focusing on exploration and are opening up to new foundations (Maylor, 2006) because traditional approach is no longer able to deal with frequent changes. The success rate is not satisfying and projects are failing.

Flexible model in projects promote continuous findings of new ways of doing things (Williams, 2005). Possible constraints that come up due to exploitation rapidly overcome with exploration of solutions and vice versa. Due to this, the project leader is able to adopt exploration or exploitation mode whichever is required. Project manager's freedom in choice of solutions (either exploration or exploitation) is the key element for project success (Hällgren, 2007). Based on above reviewed literature, the following hypothesis has been developed:-

Hypothesis 2: Innovation mediates the relation between ambidextrous leadership and project success.

2.4 Self-Efficacy as a Moderator

A. Bandura (2010) elaborates that the perceived self-efficacy is linked to the beliefs of the people. This concept is referred to as an individual-level construct that has three varying dimensions. Magnitude is considered to be the first dimension of self-efficacy that is measured with the level of the difficulty of a task (such as high, low, moderate) and difficulty in accomplishment that a person can believe in. Thus, a person with high magnitude might make perception to a person to accomplish difficult tasks (Compeau & Higgins, 1995).

Another dimension of the self-efficacy is the strength. It addresses the degree of certainty in a person (such as weak or strong) to which a person can accomplish a. The third level of self-efficacy is generality. It is a degree to which a judgment is restricted to a specific domain or activity task (Stajkovic & Luthans, 1998). There are researchers who consider self-efficacy as a characteristic, like general efficacy task that is not related to a particular context (Luthans, Zhu, & Avolio, 2006).

However, other researchers assume self-efficacy as a belief related to a specific task, known as task-specific self-efficacy. Schwarzer (2014) emphasizes that it does not seems to be clear how the dimensions interacts with the perceived risks. Hence, the beliefs of specific self-efficacy for a manufacturing area are known as production self-efficacy (Mosley, Boyar, Carson, & Pearson, 2008). Similarly, a self-efficacy that is particularly for computer tasks refer to computer self-efficacy (Hardin, Fuller, & Davison, 2007). Task-specific self-efficacy is considered to be a capacity to function a task out of the three distinctive definitions and one of the prominent concepts in organizational literature (Luthans et al., 2006).

Apart from the generality variations, magnitude and strengths, all the definitions of self-efficacy carry three distinctive focal points (Gist & Mitchell, 1992). Firstly, self-efficacy summarizes the perceptions of an individual of the ability to execute a task by him. This can be done by embracing external and internal information that an individual may acquire overtime. Secondly, the perception of an individual about self-efficacy is ductile. It may change by the individual's internal and external experiences. Thirdly, self-efficacy helps to provoke behavioral action. A good example of it is that an individual may adapt due to the change in the circumstances of his performance.

The main renowned definition of self-efficacy is judgment of people about their own capabilities with the help of which they put in order and perform actions that are important in achieving designated type of performance (Bandura, 1986). Self-efficacy is the belief of an individual in what he can achieve other than the judgment about his attributes (Bong & Skaalvik, 2003; Zimmerman & Cleary, 2006). Other than that, self-efficacy is also known as multi-dimensional construct that is precise to the situation (Zimmerman & Cleary, 2006).

Self-efficacy development is portrayed through four various categories related to information. According to Maddux (2016), the beliefs of self-efficacy encourages exploration activities. These include vicarious experience, performance accomplishment, emotional and psychological states, and verbal persuasion. However, an individual's behavior is considered to be the most influential information source

that serves as direct feedback. Similarly, learning can be enhanced through vicarious experiences by individuals by observing a success or failure of other people. Verbal persuasion is effective when the other individual is considered as competent and trustworthy convinced by an individual. Similarly, emotional state, such as the stress level, also helps to develop the beliefs of personal self-efficacy.

Under the construct of locus of control, self-esteem, and expectancy of the outcome, self-efficacy has been distinguished thoroughly. D. M. Williams (2010), self-efficacy may be distinguished from intentions. Expectations of the outcome can be defined as the judgment of a person regarding the potential results arising from his/her behavior (i.e., outcome-behavior expectancy). In contrast, expectations of efficacy can be explained in terms of an individual's judgment with regard to his/her ability in executing a particular behavior (i.e., behavior-person expectancy). For example, confidence within an employee to complete a particular task associated with his/her job can be considered as an expectation of efficacy.

On the other hand, an expectation of the outcome can be highlighted when an employee is observed to contemplate the outcomes associated with the completion of this particular task (for instance, in the form of positive feedback that is given by his/her supervisor). It was also observed by a researcher that the expectations associated with self-efficacy tend to impact the expectations of the outcome. Tierney and Farmer (2011) elaborates that framing the self-efficacy of employees is expectation inspired leadership. A person that has high confidence in his/her ability to complete a certain task will be more motivated to assume an outcome which is positive, while a person who is skeptical about his/her ability will be likely to expect that he/she will receive a negative outcome for his/her actions.

Self-efficacy is also different from self-esteem. While self-efficacy highlights the judgments associated with the capabilities of a person, self-esteem focuses on a person's judgment that he/she has regarding his/her self-worth. According to Artino (2012), the efficacy judgments made by individual is an idea that comes from the definition of self-efficacy. Moreover, both self-esteem, as well as self-efficacy captures motivational, affective and cognitive components. Nevertheless, a high level of affective components is captured by self-esteem and on the other

hand, self-efficacy focuses more on the components of motivation (Chen, Gully, & Eden, 2004). Self-esteem can be described as a stable and global assessment that an individual has regarding himself/herself. Whereas self-efficacy focuses on particular situations or specific tasks and depending on an individual's experiences, it varies over time.

Self-esteem is developed within an individual when he/she assesses his/her personal characteristics that might be associated with his/her appearance or intelligence. Mruk (2013) defines the role of self-esteem in linking to psychological theory. However, self-esteem is not impacted by the differences in beliefs that a person has regarding his/her self-efficacy. It also differentiated locus of control from self-efficacy. Locus of control can be either considered as an innate element when a person thinks that he/she can control his/her life, or it can also be an external element, when a person thinks that his/her life is highly influenced by the external factors which are not in his/her control. Locus of control can be described as a causal belief with regard to the behavior of a person, as well as its consequences. Whereas, self-efficacy reflects the perception a person has regarding his/her capabilities to carry out a certain task.

During the period of the 1980s, various researchers who were studying different areas of the organization started to assimilate the beliefs of self-efficacy under the area of management. Klassen and Tze (2014) claims that self-efficacy helps to teach effectiveness. Many past studies have assessed the impact of perceptions with regard to efficacy in different parts of human resource, as well as organizational processes that were related to selection and recruitment, career choice and interest, as well as training and development (Mosley et al., 2008). However, organizational researches have indicated a high interest within the value in making predictions related to different effectiveness outcomes that were obtained from various work activities. It has been observed that the significance of efficacy, as well as high interest to analyze the organizational behavior lies under the relationship that they have with the organizational, group and individual performance (Lindsley et al., 1995).

Self-efficacy is derived from social cognitive theory given by (Bandura, 1986). This theory stresses upon the advancement and practice of human agency and that people are able to exert influence over what they are able to do (Bandura, 2006). In this theory, he proposes that individuals are able to self-organize, be proactive and self-regulating. He proposes that people can predict favorable outcomes, observe and control their actions and portray themselves according to their self-efficacy. It is concluded from above definitions that an individual's goals and behavior are affected by self-efficacy and in return, self-efficacy is affected by the environment (Schunk & Meece, 2006).

Performance done in the past is the most vital basis of self-efficacy (Bandura & Benight, 2004). Individuals who have accomplished high on job-related tasks have possibly more self-assurance to finish similar tasks in future (high self-efficacy) compared to individuals who failed to do so (low self-efficacy). Managers are able to increase self-efficacy with the help of following: careful hiring, provide challenging tasks, professional development and reward for improvement (Bandura & Benight, 2004).

Self-efficacy affects the determination with which employees try to perform unique and complex tasks. Employees who are high on self-efficacy are more certain that they can be trained and execute specific tasks. Thus, it is more likely that they will keep on trying when problems arise. On the contrary, employees who have low self-efficacy or lack confidence and think that they are incompetent and cannot be trained or perform a challenging task, are likely to lose hope when the problems arise. Literature suggests that self-efficacy is a powerful determinant of job performance (Bandura & Locke, 2003).

Self-efficacy has a great effect on employees. The work that they learn and objective they choose for themselves are affected by self-efficacy (Luthans & Suzanne, 2002). Similarly self-efficacy has dominant effect on organizations. While hiring individuals, organizations should hire people who have high self-efficacy. These employees will be motivated to adopt behaviors that will help them to perform well in a workplace. High-performance goals are achieved by employees who have

high self-efficacy resulting in higher levels of job performance which is critical for success of organization (Lunenburg, 2011).

Teams play an important role in helping organizations achieve success. In dynamic business environment, organizations are able to earn a major proportion of their profit because of projects that consist of teams (Aubry & Lièvre, 2010; Garel & Lièvre, 2010; Melkonian & Picq, 2010), New innovations are considered, formed and implemented by the team projects within an organization (Archibald, 2003). A flexible sense of self-efficacy provides room for the necessary staying power in the pursuit of innovation and excellence (Bandura & Locke, 2003). Self-efficacy that is specific to an activity domain is most influenced by assessment of performance in that domain (Bandura, 1986). Self-efficacy has confirmed association with creativity among employees (Tierney & Farmer, 2004) and work teams (Shin & Zhou, 2007). Therefore, based on literature reviewed, hypothesis three has been developed:

Hypothesis 3: Self-Efficacy Moderates the relationship between Innovation and Project Success such that higher Self-Efficacy increases the chances of Project Success.

2.5 Research Model

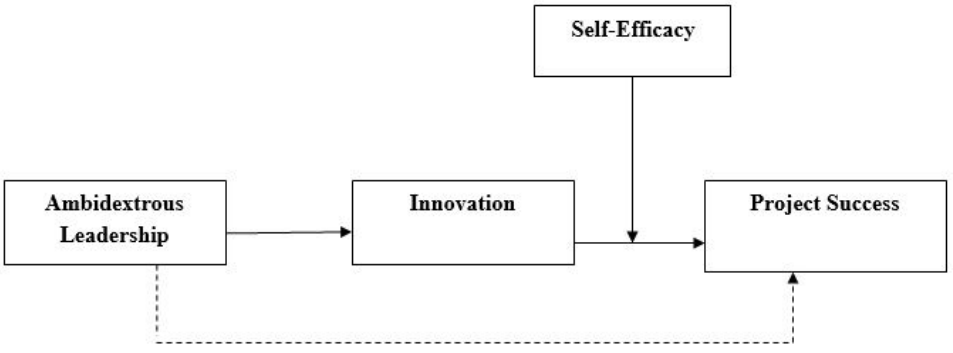

FIGURE 2.1: Research Model of Ambidextrous Leadership Impact on Project Success: Moderation of Self-Efficacy and Mediation of Innovation

2.6 Research Hypotheses

On the basis of above literature we can hypothesis that:

H_1: Ambidextrous leadership is positively associated with project success.

H_2: Innovation mediates the relation between ambidextrous leadership and project success.

H_3: Self-Efficacy Moderates the relationship between Innovation and Project Success such that higher Self-Efficacy increases the chances of Project Success.

Chapter 3

Research Methodology

The study observed the impact of Ambidextrous Leadership on the Project Success. The data were collected through questionnaires, which were distributed to the several telecom firms around twin cities and Lahore. A time of one week was given to the respondents to fill out the questionnaires. All the information was kept confidential and the results of the questionnaires are reported in the statistical form only.

3.1 Research Design

The purpose of the research study is to examine the impact of ambidextrous leadership on project success, mediated by innovation, by incorporating self-efficacy as moderator. This study is the hypotheses testing. There are multiple factors that affect and result in project success thus it is a correlational study. The amount of interference in the study was minimal since the results of the research are dependent on the extent to which the ambidextrous leadership affects project success. This means that the researcher had to rely on the information given by the respondents and could not be altered due to any kind of bias, inclination or a preconceived notion.

This is a quantitative field research. Data were collected from team members on group of projects in Telecom Sectors. Unit of sampling for analysis is individuals

working in the Telecom sector Pakistan. The nature of this research work is cross-sectional in which data have been checked in one time lag within two months to reduce common method bias.

3.2 Population and Sampling

The focus of the study is the employees working in Telecom industry of Pakistan. Sample was selected from the various firms currently operating in Rawalpindi, Islamabad and Lahore. The reason to choose telecom industry of Pakistan is that various projects running in different fields such as online gaming lounge, energy, Gigabit Passive Optical Network, social services, etc. Telecom sector strengthens the economy of Pakistan, by dragging overseas investors and this industry is also supported to the worldwide acknowledgment of Pakistan as an emerging country.

The respondents of the research are mostly from the project based organizations of Pakistan and the general population working in these associations. The questionnaires were directly distributed to them so that they could fill them as specified by their actual work settings. Questionnaires were self-administered. Respondents were asked to fill the questionnaires anonymously in order to assure them of the confidentiality and to maintain minimum bias as well.

3.2.1 Sampling Technique

Many firms do not share information of their employees because of privacy breach. Due to this reason, convenience sampling technique was used to collect the data. The researcher approached the respondents through personal and professional contacts.

3.2.2 Sample Size

A total number of 380 questionnaires were given in various offices across cities but the results are based on the analysis of only 327 responses. The remaining

questionnaires could not be used as either they were not filled properly or were not returned by the respondents.

The sample size was calculated using the formula.

Necessary sample size (n) = (Z-score) * Standard Deviation (1 – SD) / Margin of error Z-score was taken at 90% (1.645) and standard deviation was taken at 0.5, whereas, margin of error was taken at confidence interval +/- 5%.

3.3 Research Instrument

Survey was conducted through questionnaires. It is the finest possible method for collecting data as it helps in gathering quantitative data in an efficient and convenient manner. The instruments used for the present research were already developed questionnaires for each variable, based on Likert scale.

3.3.1 Project Success

Project Success was measured by using a 6-item scale developed by (Robey, Smith, & Vijayasarathy, 1993), reliability at 0.808. Respondents were asked to use 5 point scale in order to answer the questions such as "The amount of work the team produced" and "the team's adherence to budget." The 5 point Likert scale included response choices from 1 to 5 where 1 = Strongly Agree, 2 = Agree, 3 = Neutral, 4 = Disagree, 5 = Strongly Disagree.

3.3.2 Ambidextrous Leadership

Ambidextrous Leadership was measured by using a 13-item scale developed by (Rosing et al., 2011), at the reliability of 0.813. Respondents were asked to use 5 point scale in order to answer the questions such as "Allows different ways of accomplishing a task" and "Encourages experimentation with different ideas". The 5 point Likert scale included response choices from 1 to 5 where 1 = Strongly Agree, 2 = Agree, 3 = Neutral, 4 = Disagree, 5 = Strongly Disagree.

3.3.3 Innovation

Innovation was measured by using a 13-item scale developed by (J. M. Zhou & George, 2001), at reliability of 0.927. Respondents were asked to use 5 point scale in order to answer the questions such as "Not afraid to take risks" and "Is a good source of creative ideas". The 5 point Likert scale included response choices from 1 to 5 where 1 = Strongly Agree, 2 = Agree, 3 = Neutral, 4 = Disagree, 5 = Strongly Disagree.

3.3.4 Self-Efficacy

Self-Efficacy was measured with a 9-item scale developed by (Perrewé et al., 2004), at reliability of 0.90. Respondents were asked to use 5 point scale in order to answer the questions such as "I am very proud of my job skills and abilities" and "I feel threatened when others watch me work". The 5 point Likert scale included response choices from 1 to 5 where 1 = Strongly Agree, 2 = Agree, 3 = Neutral, 4 = Disagree, 5 = Strongly Disagree.

3.4 Data Analysis Technique

Data were analyzed through various techniques and methods using SPSS version 20 and the hypotheses were tested using correlation and regression analysis as well.

3.5 Demographics

The frequency tables are used to get a clear picture of the demographics of the sample. The demographic information included the age, education, experience and the gender of the respondents. As per the frequency table of the demographics, 70.6% of the respondents were male (n = 231) whereas 96 (29.4%) of the total 327 responses recorded as female. The age groups were divided into three categories. The table indicates that most respondents lie between the ages 20 – 30, which

constitute 35.8% (n = 117) of the total sample; closely followed by age windows of 31 – 40 (44%) and 41 – 50 (19%).

TABLE 3.1: Frequency Table

Description	**Range**	**Frequency**	**Percentage**
Gender	Female	96	29.40%
	Male	231	70.60%
Age	20 – 30	117	35.80%
	31 – 40	144	44.00%
	41 – 50	62	19%
	>50	4	1.20%
Experience	<1	25	7.60%
	1 – 3	107	32.70%
	4 – 6	103	31.50%
	>6	92	28.10%
Education	Bachelor	79	24.20%
	Masters	142	43.40%
	MS	81	24.80%
	PhD	11	3.40%
	Any other	14	4.30%

The percentage indicates that most of the workforce employed in firms is younger. It helps validate the results and the analysis as the focus of the study is mainly the subordinates working, providing a better picture of the supervision in the telecom sector.

Similarly, concurring with the age demographic of the respondents, experience shows the similar picture. According to the frequency table, 32.7% (n = 107) of the respondents have 1 – 3 years experience working in the telecom sector. Whereas, 28.1% (n = 92) of the respondents have more than 6 years experience. As per the education level is concerned, majority of the respondents have Masters Degree with 43.4% (n = 142) laying in this category. 24.8% and 24.2% of the respondents have MS and Bachelor's degrees respectively, whereas only 11 of the 327 (4.3%) respondents held PhD degrees.

3.6 Descriptive Statistics

Descriptive statistics of all variables such as ambidextrous leadership, innovation, self-efficacy and project success are presented in the table below. The means and standard deviations of all variables are shown in the table 4.2.

Table 3.2: Descriptive Statistics

Variables	**Sample Size**	**Minimum**	**Maximum**	**Mean**	**Standard Deviation**
Ambidextrous Leadership	327	1.54	4.69	3.2	0.68
Innovation	327	1.23	4.77	3.19	0.8
Self-Efficacy	327	1.22	4.78	3.25	0.81
Project Success	327	1	4.83	3.03	0.82

Information regarding variables descriptive statistics is presented in the **Table 4.2**. Higher mean values show respondent's tendency towards agreement side and lower mean values represent respondent's tendency towards disagreement side. The mean value for ambidextrous leadership was 3.20 and standard deviation was 0.68. The mean value for innovation was 3.19 and standard deviation was 0.80. The mean value for self-efficacy was 3.25 and standard deviation was 0.81. Moreover, the mean value for project success was 3.03 and standard deviation was 0.82.

3.7 Control Variables

One-way ANOVA test was run for control variables. The purpose was to see impact of demographic variables on outcome variable. Our objective is to check the relationships, which were proposed in the model. If any demographic variables influence the outcome variable, its effect will be controlled then.

Information related to control variables are shown in the table above. Results showed significant difference in project success across gender ($F=14.83$, $p<0.000$), and education ($F=3.74$, $p<0.005$), and shows non-significant difference in project

Table 3.3: Control Variables

Control Variables	**F-Value**	**Significance**
Gender	14.83	0
Age	1.1	0.348
Education	3.74	0.005
Experience	1.52	0.209

success across age (F=1.10, p<0.05) and experience (F=1.52, p<0.05). Hence, gender and education need to be controlled because they show significant influence on project success.

3.8 Reliability Analysis

Scale consistency is called reliability. For anticipation of scale internal consistency reliability analysis was conducted. Value of Cronbach's alpha is between 0 and 1. High value of Cronbach's alpha signifies good reliability and low value of Cronbach's value signifies poor reliability and poor scale. The threshold value for Cronbach's alpha is greater than 0.7.

Table 3.4: Scale Reliability

Variables	**Reliability**	**Items**
Ambidextrous Leadership	0.81	13
Innovation	0.92	13
Self-Efficacy	0.9	9
Project Success	0.8	6

Information about reliability of scales is shown in the table above. The results depicted that the reliability of ambidextrous leadership was 0.81, which surpassed threshold value. Moreover, the reliability of innovation was 0.92, which is greater than threshold value. Furthermore, the reliability of self-efficacy was 0.90 as depicted in the table that matches the threshold. The reliability of project success

was 0.80, which was greater than the threshold value. Overall all the measures have good reliability, which are greater than the threshold value.

3.9 Confirmatory Factor Analysis

Confirmatory Factor Analysis (CFA) technique was pursued for validating the measurement model, which contained of four latent variables: Ambidextrous leadership, project success, innovation and self-efficacy . AMOS was used to analyze the measurement model. The model was analyzed through fit statistics. The mix of various fit indices: Goodness of Fit Index (GFI) characterizes the unit of progress and covariance proportion.GFI explain total fit for the estimated model . The value should close to 1 for indicating a GFI, value above than 0.8 also indicates the acceptable fit, but the value below 0.8 indicates poor model fit whereas above 0.80 is acceptable fit. Adjusted Goodness of Fit Index (AGFI) is the index associated to GFI. AGFI adjusts the value of GFI according to degree of freedom. Value should be close to 1 for good model fit while the value lying below 0.80 indicates poor model fit whereas above 0.80 is acceptable fit. (Byrne, 2001). Moreover, different threshold values for RMSEA are there but according to (Lomax & Schumacker, 2004) value less than 0.05 is acceptable.

3.9.1 Confirmatory Factor Analysis for Latent Variable

Independent Variable

Ambidextrous Leadership was the first variable of the study coded as AL and the scale contain 13-items. This scale loading factor was AL1 =0.6 , AL2 =0.62 , AL3=0.61 , AL4=0.59 , AL5=0.58, AL6=0.62, AL7=0.57, AL8=0.58, AL9=0.59, AL10=0.62,AL11=0.59, AL12=0.70, AL13=0.70. This variable showed favorable results and there was no need to delete any item in this variable. Statistic fit indicates the value to be on acceptable criteria, such as, RMSEA = 0.036, CFI = .974, and TLI= .967, IFI=.974, CHI SQUARE= 1.426.

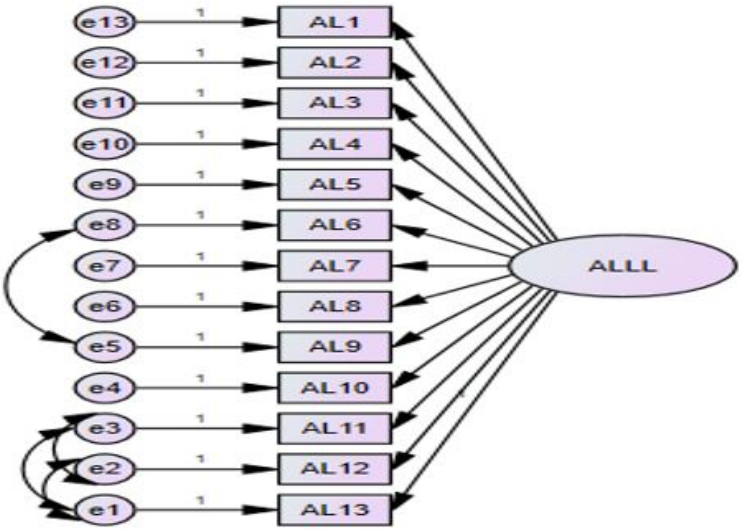

FIGURE 3.1: CFA for Ambidextrous Leadership (AL)

Dependent Variable

The dependent variable of the study was project success coded as PS and the scale contain 6-items. This scale loading factor was PS1 = 0.74, PS2 =0 .59, PS3 = 0.69, PS4=0 .69, PS5=0.54 and PS6=.60. This variable showed favorable results and there was no need to delete any item in this variable. Statistic fit indicates the value to be on acceptable criteria, such as, RMSEA = 0.061, CFI =.993, and TLI= .988, IFI=.933, CHI SQUARE= 1.420.

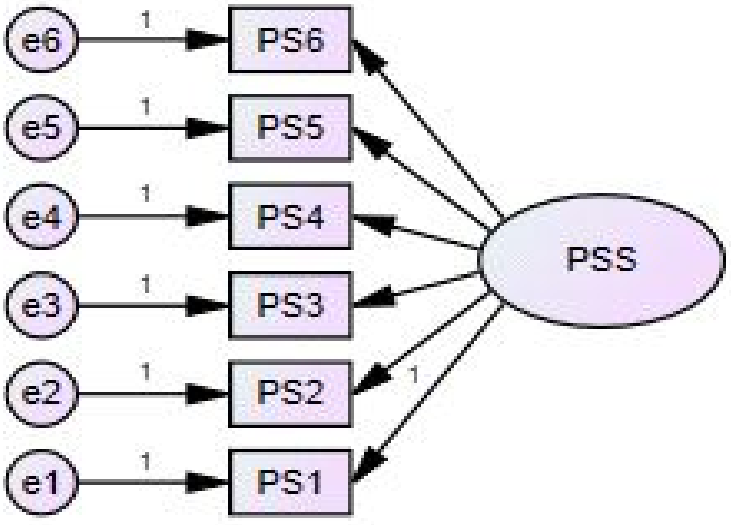

FIGURE 3.2: CFA for Project Success (PS)

Mediating Variable

Innovation coded as INN and the scale contain 13-items. This scale loading factor was INN1 =0.72, INN2=0.76, INN3=0.75, INN4=0.71, INN5=0.75, INN6=0.73, INN7=0.73, INN8=0.73, INN9=.75, INN10=.74., INN11=.71, INN12=.75, INN13 =.35. This variable showed favorable results and there was no need to delete any item in this variable. Statistic fit indicates the value to be on acceptable criteria, such as, RMSEA = 0.061, CFI =.966, and TLI= .959, IFI=.966, CHI SQUARE= 2.201.

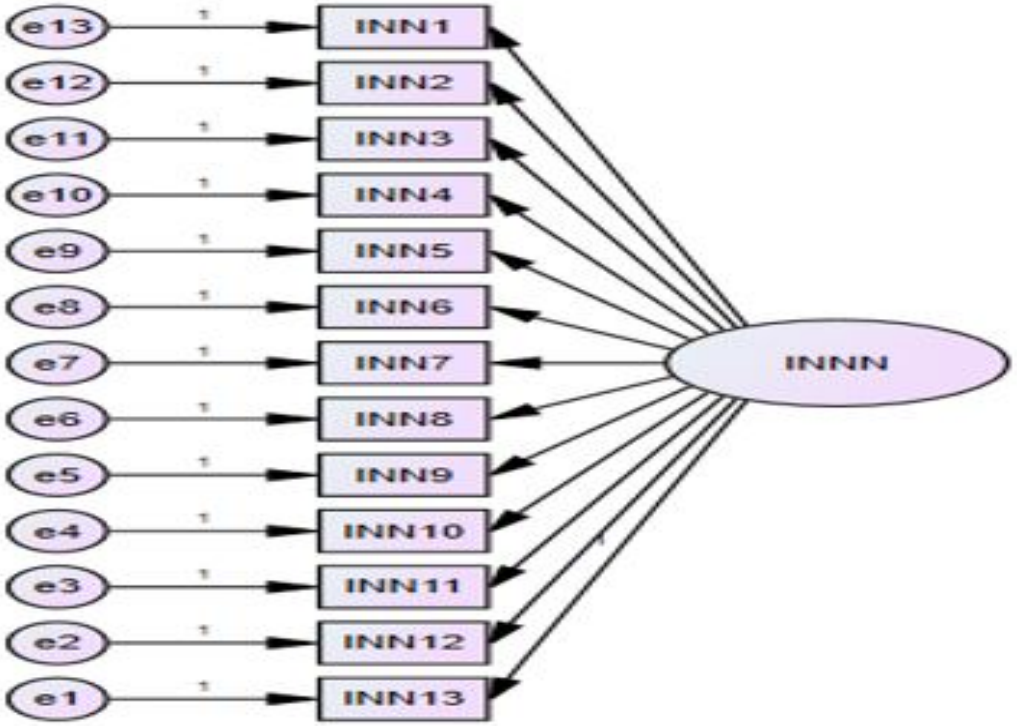

FIGURE 3.3: CFA for Innovation (INN)

Moderating Variable

Self-Efficacy coded as SE and the scale contain 9-items. This scale loading factor was SE1 =0.70, SE2=0.71, SE3=0.78, SE4=0.66, SE5=0.78, SE6=0.68, SE7=0.71, SE8=0.73, SE9=.76.This variable showed favorable results and there was no need to delete any item in this variable. Statistic fit indicates the value to be on acceptable criteria, such as, RMSEA = 0.074, CFI =.969, and TLI= .957, IFI=.969, CHI SQUARE= 2.779.

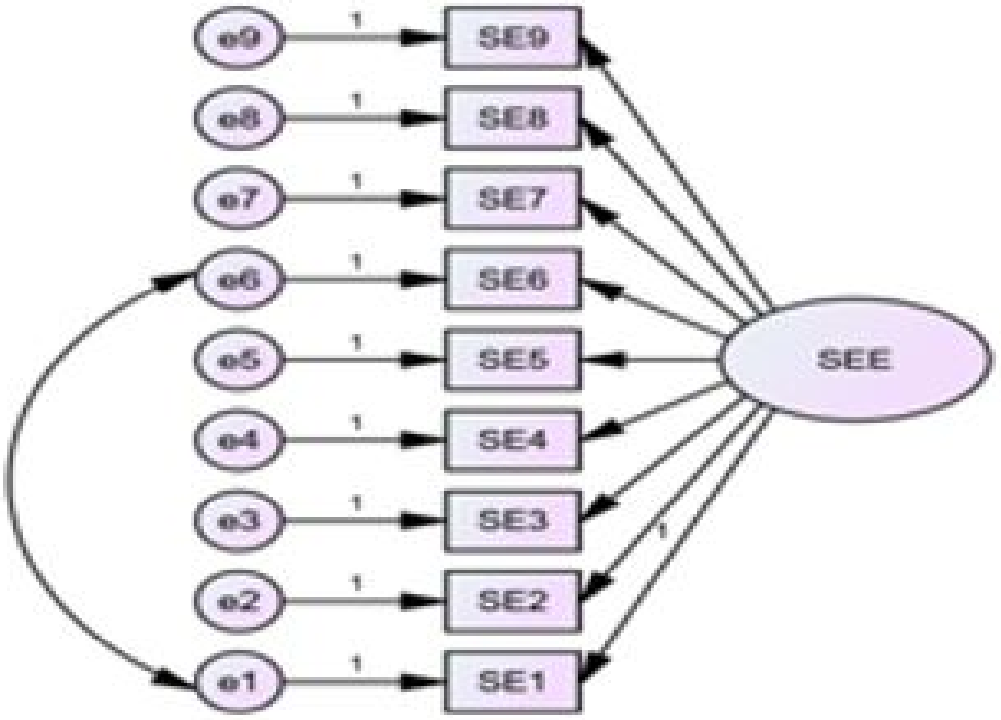

FIGURE 3.4: CFA for Self-Efficacy(SE)

3.9.2 Measurement Model

For measurement model validation confirmatory factor analysis was conducted following Anderson and (Gerbing & Anderson, 1988) suggestions that consisted of four latent variables ambidextrous leadership, innovation, self-efficacy and project success.

TABLE 3.5: Measurement Model

Model	CMIN/DF	CFI	TLI	IFI	AGFI	GFI	RMSEA
Baseline Hypothesized Model	1.374	0.948	0.945	0.948	0.855	0.87	0.034

The figure interpretation is important for full understanding of the above table. The AML latent variable shows ambidextrous leadership, INN exhibits innovation, SE indicates self-efficacy and PS shows project success. Table 4.1 showed the results for model fit. The values presented in the table above presented good model fit as suggested by (Hair et al 2009).

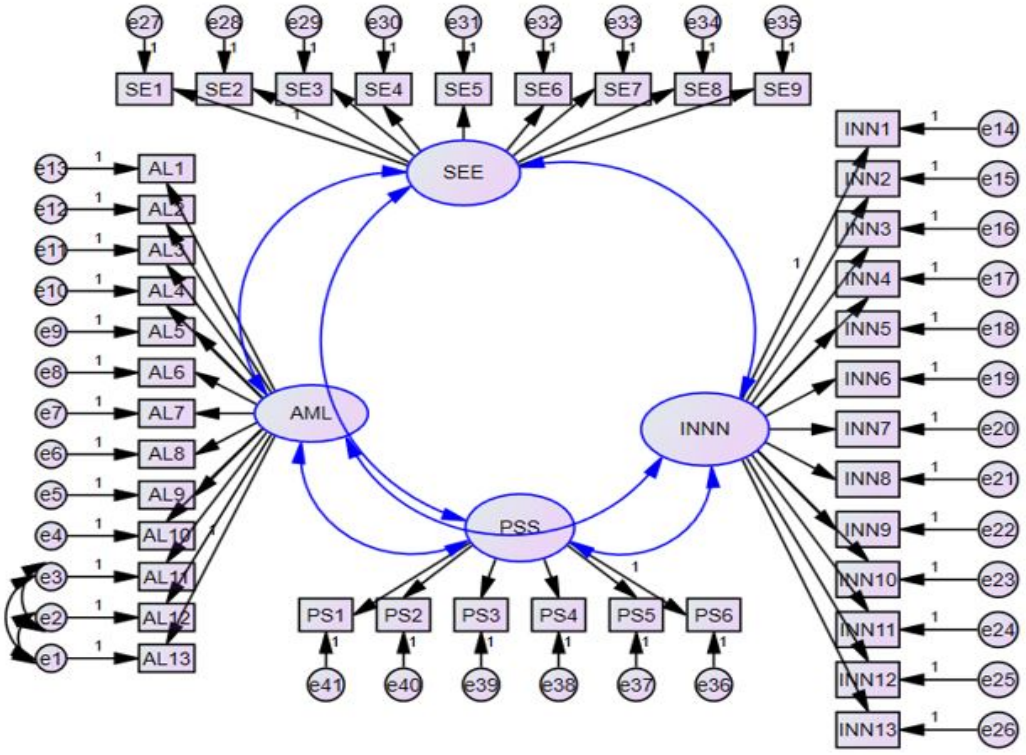

FIGURE 3.5: Measurement Model

Incremental fit index (IFI), comparative fit index (CFI) and Tucker-lewis index values were .948, .948 and .945 respectively which indicate good model fit. Furthermore, goodness of fit index and adjusted goodness of fit index (AGFI) values were .870 and .855, which also exhibit good model fit. Last but not the least root mean square error of approximation value was .034, which represented good model fit. Overall, the four factor model results provide evidence for model fit.

Chapter 4

Results

4.1 Correlation Analysis

Correlation analysis was conducted to determine the relations among variables. The present study aims to deduce the correlation between ambidextrous leadership and project success, mediating role of innovation and moderating role of self-efficacy in order to make valid the proposed hypotheses.

Correlation was carried out to know the variation between two variables. Pearson correlation ascertains the strength and nature of link through correlation that is from -0.1- 0.1. Positive sign represents that variables are moving in same direction and negative sign shows that variables are moving in opposite direction. Furthermore, "r" value shows the strength of the link.

Table 4.1: Correlation

Variables	**1**	**2**	**3**	**4**
Ambidextrous Leadership	1			
Innovation	.292**	1		
Self-Efficacy	.182**	.430**	1	
Project Success	.181**	.479**	.226**	1

p<0.05*,p<0.01**

Table above depicts information related to correlation between variables. Results show that ambidextrous leadership has significant positive association with all variables. The correlation of ambidextrous leadership with innovation was (r=.292, p<0.05),self-efficacy (r=.182, p <0.05), project success (r=.181, p <0.05). The correlation of innovation with self-efficacy was positive and significant (r=.430, p<0.05) and project success was positive and significant (r=.479, p <0.05). Furthermore, the correlation of self-efficacy with project success was also positive and significant (r=-.226, p<0.05).

4.2 Regression Analysis

Correlation analysis was carried out for investigating the existence of relationship between variables but it only deduces the existence of link between variables and gives no proof about the causal links among variables. Regression analysis was carried out to find out causal relationship to validate dependency of one variable on another variable. Regression has two types, simple regression and multiple regression. Simple regression or linear regression are conducted, when there are two variables and the purpose is to establish causal relationship. When more than two variables are included multiple regression is conducted like in the case of mediation and moderation.

Table 4.2: Simple Regression

		Project Success	
Predictor	β	$\mathbf{R^2}$	Δ $\mathbf{R^2}$
Step 1			
Control Variables		0.066	0.066
Step 2			
Ambidextrous Leadership	.207**	0.096	0.029

Hypothesis 1, articulates that ambidextrous leadership positively influences project success. Results in the table provided strong justification. Results suggested that there were control variables because there was significant impact of demographics on project success. Therefore, demographics were included.

Results indicate that ambidextrous leadership has a positive and significant relationship with project success as indicated by the regression coefficient (B=.207, p<0.001). In addition, the value of (R= .096) depicts that ambidextrous leadership brings approximately 10% variations in project success.

4.2.1 Mediation and Moderation

Mediation and moderation analyses were done using (Hayes, 2013) process macros. Mediation analysis was carried out to examine innovation as a mediator between ambidextrous leadership and project success. For that purpose, model 4 was used for mediation regression analysis. Furthermore, moderation analysis was carried out to investigate self-efficacy as a moderator between innovation and project success, Model 1 was used to run moderation. Furthermore, as our model is mediated moderation model so for that purpose model 14 was utilized.

TABLE 4.3: Mediation

IV	**Effect of IV on M**	**Effect of M on DV**	**Direct Effect**	**Total Effect**	**Bootstrapping Result for Indirect Effect**	
					LL 95%	**UL 95%**
Ambidextrous Leadership	.325***	.439***	0.063	.206**	0.0849	0.216

*N=327, IV Independent variable, M Mediator Variable, DV Dependent variable, LL Lower level confidence interval UL Upper level confidence interval ***p <.0000.*

Hypothesis 2 states that innovation will mediate the relation between ambidextrous leadership and project success. Results in the table provided strong justification. Table showed that indirect effect of ambidextrous leadership on project success has the lower level confidence interval and upper level confidence interval of .0849 and .2157, respectively . Both the ULCI and LLCI have same sign positive and there was no zero present between these two. Therefore, we conclude from here that mediation occurs. Hence, hypothesis two supported that innovation mediates the relationship between ambidextrous leadership and project success.

TABLE 4.4: Moderation

Variables	**B**	**SE**	**T**	**P**	**LLCI 95%**	**ULCI 95%**
Constant	5.332	0.647	8.23	0	4.058	6.6072
Int_Term (Inn*SE)	0.316	0.0533	5.926	0	0.2111	0.4209
SE_MEAN	0.1624	0.0724	2.2448	0.0255	0.0201	0.3048

N=327, p <.05

Hypothesis 3 enunciates that self-efficacy moderates the relationship among innovation and project success, such that higher Self-Efficacy increases the chances of Project Success. Results in the table provided strong justification for hypothesis. The reason is interaction term of "innovation and self-efficacy" moderates on the relationship of "project success" has the lower level and upper level confidence interval of 0.2111 and 0.4209, respectively; and both have the same sign and no zero is present. Moreover, the interaction term showed positive and significant regression coefficient (B=0.3160, p<.05) means that self-efficacy moderates the link of innovation and self-efficacy such that higher self-efficacy increases the chances of project success. Therefore, we conclude that hypothesis 3 was supported for moderation.

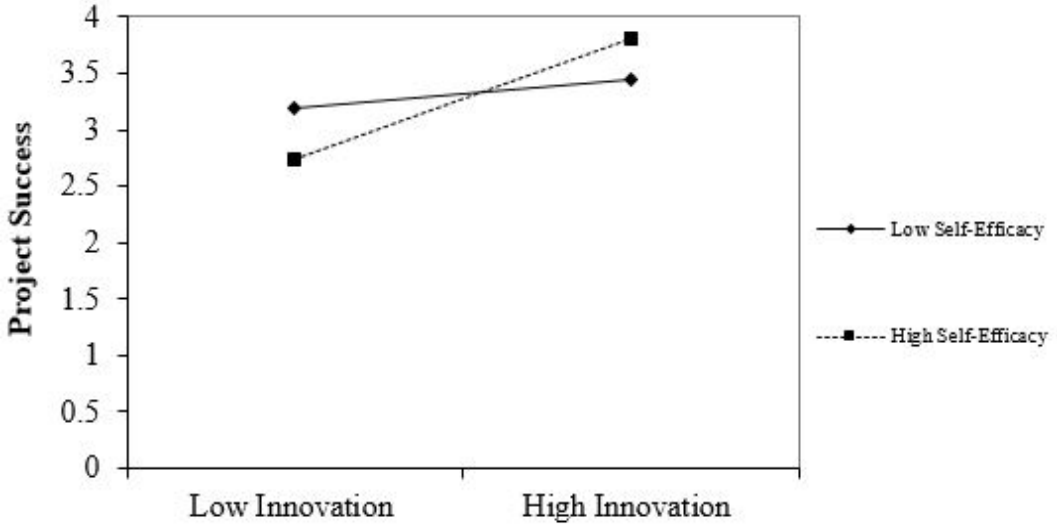

FIGURE 4.1: Interaction Graph

Simple slope was plotted for further evidence for moderation of self-efficacy. The slope showed that the relationship between innovation and project success was stronger when there is high self-efficacy. The figure indicated that when innovation and self-efficacy were high the chances of project success would be high and vice versa. When innovation as well as self-efficacy is low the chances that projects are successful will also be low.

Table 4.5: Hypotheses Summary

Hypothesis	**Statement**	**Result**
H1	Ambidextrous leadership is positively associated with project success.	**Accepted**
H2	Innovation mediates the relation between ambidextrous leadership and project success.	**Accepted**
H3	Self-Efficacy Moderates the relationship between Innovation and Project Success such that higher Self-Efficacy increases the chances of Project Success.	**Accepted**

Chapter 5

Conclusion and Recommendations

5.1 Discussion

As per the regression analysis, the first hypothesis had been accepted providing empirical proofs that ambidextrous leadership is positively associated with project success. The analysis results support the previous literature claim and provide further evidences of a positive and a significant relationship between Ambidextrous Leadership and Project Success. For the projects to be successful, the leaders need to be ambidextrous by being explorative and exploitative according to the situation to meet challenges and overcome constraints. Leaders need to be explorative along with their team members when faced with complex environment so that they can come up with novel solutions and be exploitative when the environment is stable. As per the results, the correlation indicates that all the variables are positively and significantly correlated. These results are backed by literature. For example; it has been discussed in previous papers that exploitation and exploration are crucial for the long-run survival and success of firms (Chen et al., 2004) and for the leaders to be effective, they need to adopt both of these leadership styles according to the required situation (Baškarada & Watson, 2017). Leaders should

develop strategies that develop agility as well as rigor in projects to meet their goals (Lee et al., 2007).

Similarly, our second hypothesis, i.e. Innovation mediates the relation between Ambidextrous Leadership and Project Success has also been accepted. The analysis results support the previous literature claim by (Rosing et al., 2011), that two complementary sets of opening and closing behaviors positively predict team innovation. By using these behaviors, the leader facilitates high levels of innovation among members (Zacher & Rosing, 2015) and provides further evidences of a positive and a significant relationship of innovation as a mediator. This particular research studied the mediating effect of the Innovation between Ambidextrous Leader and Project Success. The acceptance of mediation hypothesis solidifies the claim that ambidextrous leaders motivate and support employees to make an effort towards using innovation to come up with new and novel ideas for accomplishing tasks. Innovation is a requirement to get projects done as uniqueness is an inherent part of a project. When the leader and team members are innovative, they deal more capably with ambiguous situations and constraints. Hence through innovation, team members are able to achieve better outcomes. For innovation in project based organizations, innovative culture is necessary where everyone can give their innovative ideas independently when the project leader or team members face challenges.

The third objective of this study was to find a moderating role of Self-efficacy between innovation and project success. The results supported the third hypothesis which states that self-efficacy moderates the relationship between innovation and project success such that higher self-efficacy increases the chances of project success. Self-efficacy is strongly linked with innovation and project success. Self-efficacy strengthens the relationship between innovation and project success. Team members with high self-efficacy develop more innovative ideas and work outcome as compared to other team members with low level of self-efficacy. High level of self-efficacy enhances the creativity of the team member towards the achievement of project success (Mittal & Dhar, 2015).

5.2 Recommendations

5.2.1 Theoretical Implication

The present study has many contributions in the domain of project management regarding leadership. In the previous literature, no clear information was found about the effect of ambidextrous leadership on project success. The present research confirmed that ambidextrous leadership has a positive effect on project success. The mediating role of innovation between ambidextrous leadership and project success was also conceptualized so it was revealed that innovation mediates this relationship. The finding of current study also shows that self-efficacy moderates the relationship between innovation and project success by strengthening it.

The research which is being conducted till date has further added to the present literature work theoretically. It has shed light on new facts in order to improve Pakistan's developing economy.

Q.1 How does Ambidextrous Leadership impact Project Success?

Q.2 How does Innovation mediate the relationship between Ambidextrous Leadership and Project Success?

Q.3 How does Self-Efficacy act as a moderator between Innovation and Project Success?

5.2.2 Practical Implication

The current study has several practical implications. It demonstrates that ambidextrous leadership improves project success. Therefore, it is suggested that project managers in different project based organizations should try to be ambidextrous and allow exploitation and exploration with their team members according to the situation. When the environment is unstable, the project managers allow the employees to exploit organizational assets and resources and when the organization is stable, they encourage the employees to explore and come up with

new and unique ideas thus resulting in successful outcomes of a project. Successful implementation of project activities accordingly enables the organization to achieve the preferred objective of a particular project.

The current study proposes that managers of the project based organization must realize how to increase the self-efficacy of team members so that they bring innovative ideas for the project success. Managers can do this by empowering their subordinates by respecting their ideas and efforts. Therefore, employees can identify the consequences of their efforts and work on the success of different projects. Managers can also empower their employees by training to improve their skills which will enable them to perform their role more efficiently, effectively and confidently. They can also hire employees in the first place who have high self-efficacy.

5.3 Limitations

No study is without certain limitations and there is always some room for further refinement. This research is no different. There are always so many factors that can be considered while conducting a research on a certain subject. The options are generally limited in order to make the research manageable.

There are a few limitations that future researchers should keep in mind while conducting research. Firstly, because of the time constraint, only single mediator and moderator were used in the study. Future researchers can improve the model by checking other mediators like culture and global environment. They can also check other moderators like organizational social capital and personality traits. Secondly, the data were collected once. The future researchers can use time lag for data collection. Thirdly, the sample size for the study was 327 which are although sufficient, but a much larger sample size would further help solidify the study results. The larger the sample size of any research study, the greater the validity and implications of the study.

5.4 Directions for Future Research

This research is merely a starting point into the subject area. There are several different directions in which future researchers can go from here. By incorporating more relevant variables can really help elevate the already developed grounds for the research in this specific area. Adding more mediators of the Ambidextrous Leadership such as fairness perception and trust, etc. can provide more definite and enticing results.

Likewise, adding more moderators to the framework, not only between Innovation and Project Success but also among Ambidextrous Leadership and Innovation will help further understand the path and the effect of each variable on the other. Gender, perception of leadership effectiveness, follower motive patterns and other behavioral variables may provide a more comprehensive picture of factors leading up to the ambidextrous leadership.

5.5 Conclusion

The purpose of the research is to discover how ambidextrous leadership impacts project success by using innovation as a mediator and self-efficacy as a moderator. To find the objectivity of the result, we distributed 380 questionnaires and collected 327 and only those 327 questionnaires were considered for analysis. According to the result of the study, H1, H2 and H3 are accepted.

Exploitation and exploration that are the basic elements of an ambidextrous leadership are critical for the successful completion of projects and projects are also vital for long-run survival and prosperity of organizations. Practicing ambidexterity in projects is very important for project managers. This study provides evidence that implies for survival, organizations need to successfully exploit their current business and explore into new aspects by reconfiguring available resources. This article has explored how leaders within projects actually implement ambidexterity.

References

Adler, P. S., Goldoftas, B., & Levine, D. I. (1999). Flexibility versus efficiency? a case study of model changeovers in the toyota production system. *Organization science*, *10*(1), 43–68.

Agarwal, N., & Rathod, U. (2006). Defining 'success' for software projects: An exploratory revelation. *International journal of project management*, *24*(4), 358–370.

Agostini, L., Nosella, A., & Filippini, R. (2016). Towards an integrated view of the ambidextrous organization: A second-order factor model. *Creativity and Innovation Management*, *25*(1), 129–141.

Ahlers, M., & Wilms, M. (2017). Ambidextrous leadership in innovation: A multiple case study of innovation leaders on the alignment of opening and closing leader behaviors.

Alghamdi, F. (2018). Ambidextrous leadership, ambidextrous employee, and the interaction between ambidextrous leadership and employee innovative performance. *Journal of Innovation and Entrepreneurship*, *7*(1), 1–14.

Allio, R. J. (2013). Leaders and leadership–many theories, but what advice is reliable? *Strategy & Leadership*.

Amabile, T. M. (1983). The social psychology of creativity: A componential conceptualization. *Journal of personality and social psychology*, *45*(2), 357–358.

Amabile, T. M. (1988). A model of creativity and innovation in organizations. *Research in organizational behavior*, *10*(1), 123–167.

Amabile, T. M., Conti, R., Coon, H., Lazenby, J., & Herron, M. (1996). Assessing the work environment for creativity. *Academy of management journal*, *39*(5),

1154–1184.

Anantatmula, V. S. (2010). Project manager leadership role in improving project performance. *Engineering Management Journal*, *22*(1), 13–22.

Andersen, E. S., Dyrhaug, Q. X., & Jessen, S. A. (2002). Evaluation of chinese projects and comparison with norwegian projects. *International Journal of Project Management*, *20*(8), 601–609.

Anderson, N., De Dreu, C. K., & Nijstad, B. A. (2004). The routinization of innovation research: A constructively critical review of the state-of-the-science. *Journal of organizational Behavior*, *25*(2), 147–173.

Anderson, N., Potočnik, K., & Zhou, J. (2014). Innovation and creativity in organizations: A state-of-the-science review, prospective commentary, and guiding framework. *Journal of management*, *40*(5), 1297–1333.

Andriopoulos, C., & Lewis, M. W. (2009). Exploitation-exploration tensions and organizational ambidexterity: Managing paradoxes of innovation. *Organization science*, *20*(4), 696–717.

Antonakis, J., Avolio, B. J., & Sivasubramaniam, N. (2003). Context and leadership: An examination of the nine-factor full-range leadership theory using the multifactor leadership questionnaire. *The leadership quarterly*, *14*(3), 261–295.

Archibald, R. D. (2003). Managing high-technology programs and projects.

Argyris, C., & Schön, D. A. (1978). Organizational learning: A theory of action perspective addison. *Reading, MA: Wesley*.

Artino, A. R. (2012). Academic self-efficacy: From educational theory to instructional practice. *Perspectives on medical education*, *1*(2), 76–85.

Aubry, M., & Lièvre, P. (2010). Ambidexterity as a competence of project leaders: A case study from two polar expeditions. *Project Management Journal*, *41*(3), 32–44.

Aubry, M., Lièvre, P., & Hobbs, B. (2010). Project management in extreme environments. *Project Management Journal*, *41*(3), 2–3.

Avolio, B. J., Bass, B. M., & Jung, D. I. (1999). Re-examining the components of transformational and transactional leadership using the multifactor

leadership. *Journal of occupational and organizational psychology*, *72*(4), 441–462.

Baden-Fuller, C., & Haefliger, S. (2013). Business models and technological innovation. *Long range planning*, *46*(6), 419–426.

Balconi, M., Brusoni, S., & Orsenigo, L. (2010). In defence of the linear model: An essay. *Research policy*, *39*(1), 1–13.

Bandura. (1977). Self-efficacy: toward a unifying theory of behavioral change. *Psychological review*, *84*(2), 191–216.

Bandura. (1986). Social foundations of thought and action. *Englewood Cliffs, NJ*, *1986*.

Bandura. (2006). Guide for constructing self-efficacy scales. *Self-efficacy beliefs of adolescents*, *5*(1), 307–337.

Bandura, & Benight, A. (2004). Social cognitive theory of posttraumatic recovery: The role of perceived self-efficacy. *Behaviour research and therapy*, *42*(10), 1129–1148.

Bandura, & Locke, E. (2003). Negative self-efficacy and goal effects revisited. *Journal of applied psychology*, *88*(1), 87–99.

Bandura, A. (2010). Self-efficacy. *The Corsini encyclopedia of psychology*, 1–3.

Barnwell, D., Nedrick, S., Rudolph, E., Sesay, M., & Wellen, W. (2014). Leadership of international and virtual project teams. *International Journal of Global Business*, *7*(2), 1–8.

Baškarada, S., & Watson, J. (2017). Managing the exploitation-exploration trade-off: how leaders balance incremental and discontinuous innovation. *Development and Learning in Organizations: An International Journal*, *31*(4), 13–16.

Baškarada, S., Watson, J., & Cromarty, J. (2016). Leadership and organizational ambidexterity. *Journal of Management Development*, *35*(6), 778–788.

Bass, B. M. (1985). Leadership and performance beyond expectations. *New York, NY: The Free Press*.

Bass, B. M. (1999). Two decades of research and development in transformational leadership. *European journal of work and organizational psychology*, *8*(1),

9–32.

Bass, B. M., & Stogdill, R. M. (1990). Bass & stogdill's handbook of leadership: Theory, research, and managerial applications. *3rd ed.,Free Press, New York, NY*.

Bennis, W., & Nanus, B. (1985). Leaders: The strategies for taking charge. newyork: Harper& row, publishers.

Birkinshaw, J., & Gupta, K. (2013). Clarifying the distinctive contribution of ambidexterity to the field of organization studies. *Academy of Management Perspectives*, *27*(4), 287–298.

Bledow, R., Frese, M., Anderson, N., Erez, M., & Farr, J. (2009). A dialectic perspective on innovation: Conflicting demands, multiple pathways, and ambidexterity. *Industrial and Organizational Psychology*, *2*(3), 305–337.

Bledow, R., Frese, M., & Mueller, V. (2011). Ambidextrous leadership for innovation: The influence of culture. *Advances in global leadership*, 41–69.

Blomquist, T., Hällgren, M., Nilsson, A., & Söderholm, A. (2010). Project-as-practice: In search of project management research that matters. *Project management journal*, *41*(1), 5–16.

Bong, M., & Skaalvik, E. M. (2003). Academic self-concept and self-efficacy: How different are they really? *Educational psychology review*, *15*(1), 1–40.

Boons, F., & Lüdeke-Freund, F. (2013). Business models for sustainable innovation: state-of-the-art and steps towards a research agenda. *Journal of Cleaner production*, *45*, 9–19.

Boumgarden, P., Nickerson, J., & Zenger, T. R. (2012). Sailing into the wind: Exploring the relationships among ambidexterity, vacillation, and organizational performance. *Strategic Management Journal*, *33*(6), 587–610.

Brady, J., Geraldi, J., Brady, T., Davies, A., & Nightingale, P. (2012). Dealing with uncertainty in complex projects: revisiting klein and meckling. *International Journal of Managing Projects in Business*, *5*(4), 718–736.

Brink, & Erik. (2017). What is the importance of self-perception in open innovation processes?

Brown, B. (2010). Why innovation matters. *Research-Technology Management*,

53(6), 18–23.

Bucero, A., Randall, et al. (2015). Project sponsorship: Achieving management commitment for project success. *Project Management Institute*.

Bucic, T., Robinson, L., & P. (2010). Effects of leadership style on team learning. *Journal of Workplace learning*, *22*(4), 228–248.

Burke, R. (2013). Project management: planning and control techniques. *New Jersey, USA*, *26*.

Burns, J. (1978). Leadership: Transformational leadership, transactional leadership. *New York, NY: Harper Raw*, *280*.

Byrne, B. M. (2001). Structural equation modeling: Perspectives on the present and the future. *International Journal of Testing*, *1*(3-4), 327–334.

Callanan, G. A. (2004). What would machiavelli think? an overview of the leadership challenges in team-based structures. *Team Performance Management: An International Journal*, *10*(3/4), 77–83.

Caniëls, M. C., & Veld, M. (2019). Employee ambidexterity, high performance work systems and innovative work behaviour: How much balance do we need? *The international journal of human resource management*, *30*(4), 565–585.

Canonico, P., Söderlund, J., De Nito, E., Mangia, G., Turner, N., Maylor, H., & Swart, J. (2013). Ambidexterity in managing business projects–an intellectual capital perspective. *International Journal of Managing Projects in Business*.

Cao, Q., Gedajlovic, E., & Zhang, H. (2009). Unpacking organizational ambidexterity: Dimensions, contingencies, and synergistic effects. *Organization Science*, *20*(4), 781–796.

Carmeli, A., Reiter-Palmon, R., & Ziv, E. (2010). Inclusive leadership and employee involvement in creative tasks in the workplace: The mediating role of psychological safety. *Creativity Research Journal*, *22*(3), 250–260.

Chebbi, H., Yahiaoui, D., Vrontis, D., & Thrassou, A. (2017). The impact of ambidextrous leadership on the internationalization of emerging-market firms:

The case of india. *Thunderbird International Business Review*, *59*(3), 421–436.

Chen. (2017). Dynamic ambidexterity: How innovators manage exploration and exploitation. *Business Horizons*, *60*(3), 385–394.

Chen, Gully, S. M., & Eden, D. (2004). General self-efficacy and self-esteem: Toward theoretical and empirical distinction between correlated self-evaluations. *Journal of Organizational Behavior: The International Journal of Industrial, Occupational and Organizational Psychology and Behavior*, *25*(3), 375–395.

Chin, R. J. (2015). Examining teamwork and leadership in the fields of public administration, leadership, and management. *Team Performance Management: An International Journal*, *21*(3/4), 199–216.

Clarke, N. (2010). Emotional intelligence and its relationship to transformational leadership and key project manager competences. *Project Management Journal*, *41*(2), 5–20.

Compeau, D. R., & Higgins, C. A. (1995). Computer self-efficacy: Development of a measure and initial test. *MIS quarterly*, 189–211.

Conger, J. A. (1989). Leadership: The art of empowering others. *Academy of Management Perspectives*, *3*(1), 17–24.

Damanpour, F., & Aravind, D. (2006). Product and process innovations: A review of organizational and environmental determinants. *Innovation, science, and industrial change: A research handbook*, 38–66.

Damanpour, F., & Aravind, D. (2012). Managerial innovation: Conceptions, processes and antecedents. *Management and organization review*, *8*(2), 423–454.

Davila, T., Epstein, M., & Shelton, R. (2012). Making innovation work: How to manage it, measure it, and profit from it. *F T Press*.

Davis, K. (2014). Different stakeholder groups and their perceptions of project success. *International journal of project management*, *32*(2), 189–201.

De Jong, J., & Den Hartog, D. (2008). Innovative work behavior: Measurement and validation. *EIM Business and Policy Research*, 1–27.

De Jong, J., Parker, S., Wennekers, S., & Wu, C. (2011). Corporate entrepreneurship at the individual level: Measurement and determinants. *EIM research reports. Zoetermeer: EIM*, *11*, 13–40.

Dess, G. G., & Picken, J. C. (2000). Changing roles: Leadership in the 21st century. *Organizational dynamics*, *28*(3), 18–34.

Drucker, P. (2014). Innovation and entrepreneurship. *Routledge*.

Duncan, R. B. (1976). The ambidextrous organization: Designing dual structures for innovation. *The management of organization*, *1*(1), 167–188.

Dvir, T., Eden, D., Avolio, B. J., & Shamir, B. (2002). Impact of transformational leadership on follower development and performance: A field experiment. *Academy of management journal*, *45*(4), 735–744.

Edmondson, A. C. (2008). The competitive imperative of learning. *Harvard business review*, *86*(7-8), 60–7.

Farjoun, M. (2010). Beyond dualism: Stability and change as a duality. *Academy of Management Review*, *35*(2), 202–225.

Farmer, S. M., Tierney, P., & Kung-Mcintyre, K. (2003). Employee creativity in taiwan: An application of role identity theory. *Academy of management Journal*, *46*(5), 618–630.

Farr, J. L., Sin, H.-P., & Tesluk, P. E. (2003). Knowledge management processes and work group innovationin l. v. shavinina (ed.). *The international handbook on innovation*, 574–586.

Foss, L., Woll, K., & Moilanen, M. (2013). Creativity and implementations of new ideas: do organisational structure, work environment and gender matter? *International Journal of Gender and Entrepreneurship*, *5*(3), 298–322.

Garel, G., & Lièvre, P. (2010). Polar expedition project and project management. *Project Management Journal*, *41*(3), 21–31.

Gemünden, H. G., Lehner, P., & Kock, A. (2018). The project-oriented organization and its contribution to innovation. *International Journal of Project Management*, *36*(1), 147–160.

George, J. M., & Zhou, J. (2002). Understanding when bad moods foster creativity and good ones don't: the role of context and clarity of feelings. *Journal of*

applied psychology, *87*(4), 687–697.

Gerbing, J. C., & Anderson, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological bulletin*, *103*(3), 411–423.

Gibson, C. B., & Birkinshaw, J. (2004). The antecedents, consequences, and mediating role of organizational ambidexterity. *Academy of management Journal*, *47*(2), 209–226.

Giltinane, C. L. (2013). Leadership styles and theories. *Nursing Standard*, *27*(41).

Gist, M. E., & Mitchell, T. R. (1992). Self-efficacy: A theoretical analysis of its determinants and malleability. *Academy of Management review*, *17*(2), 183–211.

Gong, Y., Huang, J.-C., & Farh, J.-L. (2009). Employee learning orientation, transformational leadership, and employee creativity: The mediating role of employee creative self-efficacy. *Academy of management Journal*, *52*(4), 765–778.

Goossen, M. C., Bazzazian, N., & Phelps, C. (2012). Consistently capricious: The performance effects of simultaneous and sequential ambidexterity. *Academy of Management Proceedings*, *2012*(1), 16311.

Gordon, A., & Yukl, G. (2004). The future of leadership research: Challenges and opportunities. *German Journal of Human Resource Management*, *18*(3), 359–365.

Graen, G. B., & Uhl-Bien, M. (1995). Relationship-based approach to leadership: Development of leader-member exchange (lmx) theory of leadership over 25 years: Applying a multi-level multi-domain perspective. *The leadership quarterly*, *6*(2), 219–247.

Gully, S. M., Incalcaterra, K. A., Joshi, A., & Beaubien, J. M. (2002). A meta-analysis of team-efficacy, potency, and performance: interdependence and level of analysis as moderators of observed relationships. *Journal of applied psychology*, *87*(5), 819–832.

Hackman, J. R., & Lorsch, J. (1987). Handbook of organizational behavior. *J. Lorsch, Prentice-Hall, Englewood Cliffs, NJ*.

Halal, W. E. (1994). From hierarchy to enterprise: Internal markets are the new foundation of management. *Academy of Management Perspectives*, *8*(4), 69–83.

Hällgren, M. (2007). Beyond the point of no return: on the management of deviations. *International Journal of Project Management*, *25*(8), 773–780.

Hamel, G. (2006). The why, what, and how of management innovation. *Harvard business review*, *84*(2), 72–93.

Hardin, A. M., Fuller, M. A., & Davison, R. M. (2007). I know i can, but can we? culture and efficacy beliefs in global virtual teams. *Small Group Research*, *38*(1), 130–155.

Havermans, L. A., Hartog, D. N., Keegan, A., & Uhl-Bien, M. (2015). Exploring the role of leadership in enabling contextual ambidexterity. *Human Resource Management*, *54*(S1), 179–200.

Hayes, A. (2013). Process spss macro [computer software and manual]. *Google Scholar*.

He, Z.-L., & Wong, P.-K. (2004). Exploration vs. exploitation: An empirical test of the ambidexterity hypothesis. *Organization science*, *15*(4), 481–494.

Hennessey, & Amabile. (2010). creativity. *Annual Review of Psychology*, *61*, 569–598.

House, R. J. (1971). A path goal theory of leader effectiveness. *Administrative science quarterly*, 321–339.

Hsu, Bell, R. C., & Cheng, K. (2002). Transformational leadership and organizational effectiveness in recreational sports/fitness programs. *The Sport Journal*, *5*(2), 1–5.

Hsu, & Chang. (2007). Knowledge sharing behavior in virtual communities: The relationship between trust, self-efficacy, and outcome expectations. *International journal of human-computer studies*, *65*(2), 153–169.

Huang, J., & Kim, H. J. (2013). Conceptualizing structural ambidexterity into the innovation of human resource management architecture: The case of lg electronics. *The International Journal of Human Resource Management*, *24*(5), 922–943.

Jansen, J. J., Vera, D., & Crossan, M. (2009). Strategic leadership for exploration and exploitation: The moderating role of environmental dynamism. *The Leadership Quarterly*, *20*(1), 5–18.

Janssen, O. (2000). Job demands, perceptions of effort-reward fairness and innovative work behaviour. *Journal of Occupational and organizational psychology*, *73*(3), 287–302.

Jaussi, K. S., & Dionne, S. D. (2003). Leading for creativity: The role of unconventional leader behavior. *The Leadership Quarterly*, *14*(4-5), 475–498.

Jha, K. N., & Iyer, K. (2006). Critical determinants of project coordination. *International Journal of Project Management*, *24*(4), 314–322.

Joslin, R., & Müller, R. (2016). The relationship between project governance and project success. *International Journal of Project Management*, *34*(4), 613–626.

Jugdev, K., Mathur, G., & Fung, T. S. (2007). Project management assets and their relationship with the project management capability of the firm. *International Journal of Project Management*, *25*(6), 560–568.

Junni, P., Sarala, R. M., Tarba, S. Y., Liu, Y., & Cooper, C. L. (2015). Guest editors' introduction: The role of human resources and organizational factors in ambidexterity. *Human Resource Management*, *54*(S1), 1–28.

Katz, D., & Kahn, R. L. (1978). *The social psychology of organizations* (Vol. 2). Wiley New York.

Kaufman, J., & Pretz, J. (2002). The creativity conundrum: A propulsion model of kinds of creative contributions. *Psychology Press*.

Keeley, L., Walters, H., Pikkel, R., & Quinn, B. (2013). Ten types of innovation: The discipline of building breakthroughs. *John Wiley & Sons*.

Ketkar, S., & Puri, R. (2017). Ambidextrous human resource practices and employee performance. *Proceedings of International Conference on Strategies in Volatile and Uncertain Environment for Emerging Markets July*, 14–15.

Klassen, R. M., & Tze, V. M. (2014). Teachers' self-efficacy, personality, and teaching effectiveness: A meta-analysis. *Educational Research Review*, *12*, 59–76.

Kline, S. J., & Rosenberg, N. (2010). An overview of innovation. *Studies On Science And The Innovation Process: Selected Works of Nathan Rosenberg*, 173–203.

Laohavichien, T., Fredendall, L. D., & Cantrell, R. S. (2009). The effects of transformational and transactional leadership on quality improvement. *Quality Management Journal*, *16*(2), 7–24.

Latham, J. R. (2014). Leadership for quality and innovation: Challenges, theories, and a framework for future research. *Quality Management Journal*, *21*(1), 11–15.

Lechler, T. G., & Dvir, D. (2010). An alternative taxonomy of project management structures: linking project management structures and project success. *IEEE Transactions on engineering management*, *57*(2), 198–210.

Lee, DeLone, W., & Espinosa, J. A. (2006). Ambidextrous coping strategies in globally distributed software development projects. *Communications of the ACM*, *49*(10), 35–40.

Lee, DeLone, W., & Espinosa, J. A. (2007). Ambidexterity and global is project success: A theoretical model. *2007 40th Annual Hawaii International Conference on System Sciences (HICSS'07)*, 44–44.

Lee, Gillespie, N., Mann, L., & Wearing, A. (2010). Leadership and trust: Their effect on knowledge sharing and team performance. *Management learning*, *41*(4), 473–491.

Li, M., Wang, Y., & Mobley, W. H. (2011). Introduction–passion, compassion and complexity in global leadership research and practice. *Advances in global leadership*, 1–11.

Liang, J., Shu, R., & Farh, C. I. (2019). Differential implications of team member promotive and prohibitive voice on innovation performance in research and development project teams: A dialectic perspective. *Journal of Organizational Behavior*, *40*(1), 91–104.

Lindgren, M., & Packendorff, J. (2009). Project leadership revisited: Towards distributed leadership perspectives in project research. *International Journal of Project Organisation and Management*, *1*(3), 285–308.

Lindsley, D. H., Brass, D. J., & Thomas, J. B. (1995). Efficacy-performing spirals: A multilevel perspective. *Academy of management review*, *20*(3), 645–678.

Liu, Liu, X., & Zeng, X. (2011). Does transactional leadership count for team innovativeness? the moderating role of emotional labor and the mediating role of team efficacy. *Journal of Organizational Change Management*, *24*(3), 282–298.

Liu, Wang, X., & Sheng, Z. (2012). Achieving ambidexterity in large, complex engineering projects: a case study of the sutong bridge project. *Construction Management and Economics*, *30*(5), 399–409.

Lomax, R. G., & Schumacker, R. E. (2004). A beginner's guide to structural equation modeling. *Psychology Press*.

Lundin, R. A., Arvidsson, N., Brady, T., Ekstedt, E., Midler, C., & Sydow, J. (2015). Managing and working in project society. *Institutional Challenges of Temporary Organizations*.

Lundin, R. A., & Söderholm, A. (1995). A theory of the temporary organization. *Scandinavian Journal of management*, *11*(4), 437–455.

Lundy, V. (2013). Project leadership influences resistance to change: The case of the canadian public service. *Project Management Journal*, *44*(4), 45–64.

Lunenburg, F. C. (2011). Self-efficacy in the workplace: Implications for motivation and performance. *International journal of management, business, and administration*, *14*(1), 1–6.

Luo, B., Zheng, S., Ji, H., & Liang, L. (2018). Ambidextrous leadership and tmt-member ambidextrous behavior: the role of tmt behavioral integration and tmt risk propensity. *The International Journal of Human Resource Management*, *29*(2), 338–359.

Luthans, & Suzanne, J. P. (2002). Employee engagement and manager self-efficacy. *The Journal of Management Development*, *21*(5), 376–387.

Luthans, Zhu, W., & Avolio, B. J. (2006). The impact of efficacy on work attitudes across cultures. *Journal of World Business*, *41*(2), 121–132.

Maddux, J. E. (2016). Self-efficacy. *Interpersonal and intrapersonal expectancies*, 41–46.

Mahmoud-Jouini, S. B., Midler, C., & Silberzahn, P. (2016). Contributions of design thinking to project management in an innovation context. *Project Management Journal*, *47*(2), 144–156.

March, J. G. (1991). Exploration and exploitation in organizational learning. *Organization science*, *2*(1), 71–87.

Maylor, H. (2001). Beyond the gantt chart:: Project management moving on. *European management journal*, *19*(1), 92–100.

Maylor, H. (2006). Guest editorial, international journal of project management: Special issue on rethinking project management (epsrc network 2004–2006). *International Journal of Project Management*, *24*(8), 635–637.

McCarthy, I. P., & Gordon, B. R. (2011). Achieving contextual ambidexterity in r&d organizations: a management control system approach. *R&d Management*, *41*(3), 240–258.

McCleskey, J. A. (2014). Situational, transformational, and transactional leadership and leadership development. *Journal of Business Studies Quarterly*, *5*(4), 117–131.

Meglio, O., King, D. R., & Risberg, A. (2015). Improving acquisition outcomes with contextual ambidexterity. *Human Resource Management*, *54*(S1), s29–s43.

Meissner, D., & Kotsemir, M. (2016). Conceptualizing the innovation process towards the 'active innovation paradigm'—trends and outlook. *Journal of Innovation and Entrepreneurship*, *5*(1), 14–32.

Melkonian, T., & Picq, T. (2010). Opening the "black box" of collective competence in extreme projects: Lessons from the french special forces. *Project Management Journal*, *41*(3), 79–90.

Michael, L. H., Hou, S.-T., & Fan, H.-L. (2011). Creative self-efficacy and innovative behavior in a service setting: Optimism as a moderator. *The Journal of Creative Behavior*, *45*(4), 258–272.

Mir, F. A., & Pinnington, A. H. (2014). Exploring the value of project management: linking project management performance and project success. *International journal of project management*, *32*(2), 202–217.

Mittal, S., & Dhar, R. L. (2015). Transformational leadership and employee creativity: mediating role of creative self-efficacy and moderating role of knowledge sharing. *Management Decision*, *53*(5), 894–910.

Mohrman, S. A. (2007). Designing organizations for growth: The human resource contribution. *Human Resource Planning*, *30*(4), 34–73.

Mom, T. J., Van Den Bosch, F. A., & Volberda, H. W. (2007). Investigating managers' exploration and exploitation activities: The influence of top-down, bottom-up, and horizontal knowledge inflows. *Journal of management studies*, *44*(6), 910–931.

Montani, F., Boudrias, J.-S., & Battistelli, A. (2015). Linking managerial practices and leadership style to innovative work behavior: The role of group and psychological processes. *Leadership & Organization Development Journal*, *36*(5), 545–569.

Moriano, J. A., Molero, F., Topa, G., & Mangin, J.-P. L. (2014). The influence of transformational leadership and organizational identification on intrapreneurship. *International Entrepreneurship and Management Journal*, *10*(1), 103–119.

Mosley, D. C., Boyar, S. L., Carson, C. M., & Pearson, A. W. (2008). A production self-efficacy scale: An exploratory study. *Journal of Managerial Issues*, 272–285.

Mruk, C. J. (2013). Self-esteem and positive psychology: Research, theory, and practice. *Springer Publishing Company*.

Müceldili, B., Turan, H., & Erdil, O. (2013). The influence of authentic leadership on creativity and innovativeness. *Procedia-Social and Behavioral Sciences*, *99*, 673–681.

Mueller, J., Renzl, B., & Will, M. G. (2018). Ambidextrous leadership: A meta-review applying static and dynamic multi-level perspectives. *Review of Managerial Science*, 1–23.

Müller, R., & Jugdev, K. (2012). Critical success factors in projects: Pinto, slevin, and prescott–the elucidation of project success. *International Journal of Managing Projects in Business*, *5*(4), 757–775.

Müller, R., & Turner, J. (2010a). Attitudes and leadership competences for project success. *Baltic Journal of Management*, *5*(3), 307–329.

Müller, R., & Turner, J. R. (2007). Matching the project manager's leadership style to project type. *International journal of project management*, *25*(1), 21–32.

Müller, R., & Turner, R. (2010b). Leadership competency profiles of successful project managers. *International Journal of project management*, *28*(5), 437–448.

Mumford, M. D., & Gustafson, S. B. (1988). Creativity syndrome: Integration, application, and innovation. *Psychological bulletin*, *103*(1), 27–44.

Nemanich, L. A., & Vera, D. (2009). Transformational leadership and ambidexterity in the context of an acquisition. *The Leadership Quarterly*, *20*(1), 19–33.

Nohria, N., & Khurana, R. (2010). Handbook of leadership theory and practice. *Sage Publications*.

Northouse, P. G. (2018). Leadership: Theory and practice.

Odumeru, J. A., & Ogbonna, I. G. (2013). Transformational vs. transactional leadership theories: Evidence in literature. *International Review of Management and Business Research*, *2*(2), 355–364.

Oldham, G. R., & Cummings, A. (1996). Employee creativity: Personal and contextual factors at work. *Academy of management journal*, *39*(3), 607–634.

O'Reilly, C. A., & Tushman, M. L. (2013). Organizational ambidexterity: Past, present, and future. *Academy of management Perspectives*, *27*(4), 324–338.

Packendorff, J., Crevani, L., & Lindgren, M. (2014). Project leadership in becoming: A process study of an organizational change project. *Project Management Journal*, *45*(3), 5–20.

Papke-Shields, K. E., Beise, C., & Quan, J. (2010). Do project managers practice what they preach, and does it matter to project success? *International journal of project management*, *28*(7), 650–662.

Perrewé, P. L., Zellars, K. L., Ferris, G. R., Rossi, A. M., Kacmar, C. J., & Ralston,

D. A. (2004). Neutralizing job stressors: Political skill as an antidote to the dysfunctional consequences of role conflict. *Academy of Management Journal*, *47*(1), 141–152.

Pieterse, A. N., Van Knippenberg, D., Schippers, M., & Stam, D. (2010). Transformational and transactional leadership and innovative behavior: The moderating role of psychological empowerment. *Journal of organizational behavior*, *31*(4), 609–623.

PMI, A. (2013). guide to the project management body of knowledge (pmbok guide). *Newtown Square, PA, USA: Project Management Institute*, *5*.

Politis, J. D. (2005). Dispersed leadership predictor of the work environment for creativity and productivity. *European Journal of Innovation Management*, *8*(2), 182–204.

Porter, M. E., & Advantage, C. (1985). Creating and sustaining superior performance. *Competitive advantage*, *167*, 167–206.

Prange, C. (2012). Ambidextrous internationalization strategies: The case of chinese firms entering the world market. *Organizational Dynamics*, *41*(3), 245–253.

Purvee, A., & Enkhtuvshin, D. (2014). Transformational leadership and managers" ambidexterity: Mediating role of environmental dynamism. *International Journal of Innovation, Management and Technology*, *5*(6), 434–438.

Raisch, S., Birkinshaw, J., Probst, G., & Tushman, M. L. (2009). Organizational ambidexterity: Balancing exploitation and exploration for sustained performance. *Organization science*, *20*(4), 685–695.

Ramburuth. (2010). Effects of leadership style on team learning. *Journal of Workplace learning*, *22*(4), 228–248.

Rauniar, R., & Rawski, G. (2012). Organizational structuring and project team structuring in integrated product development project. *International Journal of Production Economics*, *135*(2), 939–952.

Rego, A., Sousa, F., Marques, C., & Cunha, M. P. (2012). Authentic leadership promoting employees' psychological capital and creativity. *Journal of business research*, *65*(3), 429–437.

Ribiere, V. M., & Tuggle, F. D. (2010). Fostering innovation with km 2.0. *Vine*, *40*(1), 90–101.

Robey, D., Smith, L. A., & Vijayasarathy, L. R. (1993). Perceptions of conflict and success in information systems development projects. *Journal of Management Information Systems*, *10*(1), 123–140.

Rosing, K., Frese, M., & Bausch, A. (2011). Explaining the heterogeneity of the leadership-innovation relationship: Ambidextrous leadership. *The leadership quarterly*, *22*(5), 956–974.

Rosing, K., Rosenbusch, N., & Frese, M. (2010). Ambidextrous leadership in the innovation process. *Innovation and international corporate growth*, 191–204.

Rothaermel, F. T., & Alexandre, M. T. (2009). Ambidexterity in technology sourcing: The moderating role of absorptive capacity. *Organization science*, *20*(4), 759–780.

Rou, J. E., Eche, Baker, G. A., & Rose, R. R. (2014). Shared vision: Transformational leadership in american community colleges. *Rowman & Littlefield*.

Sadegh Sharifirad, M., & Ataei, V. (2012). Organizational culture and innovation culture: exploring the relationships between constructs. *Leadership & Organization Development Journal*, *33*(5), 494–517.

Schunk, D. H., & Meece, J. L. (2006). Self-efficacy development in adolescence. *Self-efficacy beliefs of adolescents*, *5*, 71–96.

Schwarzer, R. (2014). Self-efficacy: Thought control of action.

Shalley, C. E. (1991). Effects of productivity goals, creativity goals, and personal discretion on individual creativity. *Journal of Applied psychology*, *76*(2), 179–185.

Shalley, C. E., Zhou, J., & Oldham, G. R. (2004). The effects of personal and contextual characteristics on creativity: Where should we go from here? *Journal of management*, *30*(6), 933–958.

Shane Wood, M., & Fields, D. (2007). Exploring the impact of shared leadership on management team member job outcomes. *Baltic Journal of Management*, *2*(3), 251–272.

Sheehan, M., Garavan, T. N., & Carbery, R. (2014). Innovation and human

resource development (hrd). *European Journal of Training and Development*, *38*(1/2), 2–14.

Shenhar, A. J., & Dvir, D. (2007). Reinventing project management: the diamond approach to successful growth and innovation. *Cambridge, MA: Harvard Business Review Press*.

Shin, S. J., & Zhou, J. (2007). When is educational specialization heterogeneity related to creativity in research and development teams? transformational leadership as a moderator. *Journal of applied Psychology*, *92*(6), 1709–1721.

Stajkovic, A. D., & Luthans, F. (1998). Social cognitive theory and self-efficacy: Goin beyond traditional motivational and behavioral approaches. *Organizational dynamics*, *26*(4), 62–74.

Sternberg, R. J., Kaufman, J. C., & Pretz, J. E. (2013). *The creativity conundrum: A propulsion model of kinds of creative contributions*. Psychology Press.

Stobbeleir, K. E., Ashford, S. J., & Buyens, D. (2011). Self-regulation of creativity at work: The role of feedback-seeking behavior in creative performance. *Academy of management journal*, *54*(4), 811–831.

Taylor, M. S., Locke, E. A., Lee, C., & Gist, M. E. (1984). Type a behavior and faculty research productivity: What are the mechanisms? *Organizational Behavior and Human Performance*, *34*(3), 402–418.

Teece, D. J. (2018). Business models and dynamic capabilities. *Long Range Planning*, *51*(1), 40–49.

Tierney, P., & Farmer, S. M. (2004). The pygmalion process and employee creativity. *Journal of Management*, *30*(3), 413–432.

Tierney, P., & Farmer, S. M. (2011). Creative self-efficacy development and creative performance over time. *Journal of Applied Psychology*, *96*(2), 277–295.

Tmeemy, S. M. H. M., Rahman, H., & Harun, Z. (2011). Future criteria for success of building projects in malaysia. *International Journal of Project Management*, *29*(3), 337–348.

Trkman, P. (2010). The critical success factors of business process management. *International journal of information management*, *30*(2), 125–134.

Trong, & Tuan, L. (2017). Reform in public organizations: the roles of ambidextrous leadership and moderating mechanisms. *Public Management Review*, *19*(4), 518–541.

Turner, Maylor, H., & Swart, J. (2015). Ambidexterity in projects: An intellectual capital perspective. *International Journal of Project Management*, *33*(1), 177–188.

Turner, & Müller, R. (2006). Choosing appropriate project managers: Matching their leadership style to the type of project. *Project Management Institute*.

Tushman, M. L., & O'Reilly, C. A. (1996). Ambidextrous organizations: Managing evolutionary and revolutionary change. *California management review*, *38*(4), 8–29.

Vera, D., & Crossan, M. (2004). Strategic leadership and organizational learning. *Academy of management review*, *29*(2), 222–240.

Voigt, T. (2014). Ambidextrous leadership in innovation management processes: exploring the dynamics of opening and closing leadership behaviors at different levels of the stage-gate model.

Wald, A., Spanuth, T., Schneider, C., Futterer, F., Schnellbächer, B., & Schoper, Y. (2015). Makroökonomische vermessung der projekttätigkeit in deutschland. *Nürnberg: GPM Deutsche Gesellschaft für Projektmanagement e. V. Retrieved May*, *8*, 2018.

Wang, G., Oh, I.-S., Courtright, S. H., & Colbert, A. E. (2011). Transformational leadership and performance across criteria and levels: A meta-analytic review of 25 years of research. *Group & organization management*, *36*(2), 223–270.

West, M. A., & Farr, J. L. (1989). Innovation at work: Psychological perspectives. *Social behaviour*.

Williams. (2005). Assessing and moving on from the dominant project management discourse in the light of project overruns. *IEEE Transactions on engineering management*, *52*(4), 497–508.

Williams, D. M. (2010). Outcome expectancy and self-efficacy: Theoretical implications of an unresolved contradiction. *Personality and Social Psychology*

Review, *14*(4), 417–425.

Wuchty, S., Jones, B. F., & Uzzi, B. (2007). The increasing dominance of teams in production of knowledge. *Science*, *316*(5827), 1036–1039.

Yang, & Cheng. (2009). Creative self-efficacy and its factors: An empirical study of information system analysts and programmers. *Computers in Human Behavior*, *25*(2), 429–438.

Yang, Huang, C.-F., & Hsu, T.-J. (2014). Knowledge leadership to improve project and organizational performance. *International Journal of Project Management*, *32*(1), 40–53.

Yang, Huang, C.-F., & Wu, K.-S. (2011). The association among project manager's leadership style, teamwork and project success. *International journal of project management*, *29*(3), 258–267.

Yu, G. A., Flett, P. D., & Bowers, J. A. (2005). Developing a value-centred proposal for assessing project success. *International Journal of Project Management*, *23*(6), 428–436.

Zacher, H., Robinson, A. J., & Rosing, K. (2016). Ambidextrous leadership and employees' self-reported innovative performance: The role of exploration and exploitation behaviors. *The Journal of Creative Behavior*, *50*(1), 24–46.

Zacher, H., & Rosing, K. (2015). Ambidextrous leadership and team innovation. *Leadership & Organization Development Journal*, *36*(1), 54–68.

Zacher, H., & Wilden, R. G. (2014). A daily diary study on ambidextrous leadership and self-reported employee innovation. *Journal of occupational and organizational psychology*, *87*(4), 813–820.

Zhou, J. (1998). Feedback valence, feedback style, task autonomy, and achievement orientation: Interactive effects on creative performance. *Journal of applied psychology*, *83*(2), 261–276.

Zhou, J., & Shalley, C. E. (2003). Research on employee creativity: A critical review and directions for future research. *Research in personnel and human resources management*, 165–217.

Zhou, J. M., & George, J. (2001). When openness to experience and conscientiousness are related to creative behavior: an interactional approach. *Journal of*

applied psychology, *86*(3), 513–524.

Zimmerman, B. J., & Cleary, T. J. (2006). Adolescents' development of personal agency: The role of self-efficacy beliefs and self-regulatory skill. *Self-efficacy beliefs of adolescents*, *5*, 45–69.

Appendix-A

Annexure 1: Questionnaire Used for Data Collection

Dear Respondent, I am an MS student at Capital University of Science and Technology, Islamabad. I am collecting data for my thesis on "Impact of Ambidextrous Leadership on Project Success with the Mediating Role of Innovation and Moderating Role of Self-Efficacy". Please feel free to share precise information as its optimal confidentiality will be ensured.

Sincerely,

Zainab Ahsan

MS (PM) Research Scholar,

Faculty of Management and Social Sciences,

Capital University of Sciences and Technology, Islamabad.

Section I

Section: 1	**Demographics**
Gender:	1- Female 2- Male
Age:	1 (20-30), 2 (31-40), 3 (41-50), 4 (>50)
Experience:	1(<1), 2(1-3), 3(4-6), 4 (>6)
Education:	1 (Bachelor), 2 (Master), 3 (MS), 4 (PhD), 5 (Any Other)

Ambidextrous Leadership

(1= strongly disagree; 2= disagree; 3= neutral; 4= agree; 5 = strongly agree;).

Items	1	2	3	4	5
My manager allows different ways of accomplishing a task					
My manager encourages experimentation with different ideas					
My manager motivates me to take risks My managergives possibilities for independent thinking and acting					
My managergives room for my own ideas					
My manager allows errors					
My managerencourages error learning					
My manager monitors and controls goal attainment					
My manager establishes routines My manager takes corrective action					
My manager controls adherence (compliance) to rules					
My manager sanctions (penalizes) errors					
My manager sticks to plans					

Innovation

(1 = strongly disagree; 2= disagree; 3= neutral; 4= agree; 5= strongly agree;).

Items	1	2	3	4	5
I suggest new ways to achieve goals or objectives I come up with new and practical ideas to improve performance					
I search out new technologies processes, techniques, and/or product ideas					
I suggest new ways to increase quality					
I am a good source of creative ideas					
I am not afraid to take risks					

I promote and champion ideas to others I exhibit creativity on the job when given the opportunity to					
I develop sufficient plans and schedules for the implementation of new ideas					
I often have new and innovative ideas I come up with creative solutions to problems					
I often have a fresh approach to problems					
I suggest new ways of performing work tasks					

Project Success

(1= strongly disagree; 2= disagree; 3= neutral; 4= agree; 5= strongly agree;).

Items	1	2	3	4	5
The amount of work my team produced.					
The efficiency of my team operations (maximum productivity)					
My team's compliance to budgets					
My teams compliance to schedule					
The quality of work my team produced					
The effectiveness of my team's interactions with people outside the team					