CAPITAL UNIVERSITY OF SCIENCE AND TECHNOLOGY, ISLAMABAD

Impact of Cultural Intelligence on Project Performance with the Mediating Role of Managerial Ambidexterity and Moderating Role of Intercultural Group Climate

by

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I want to dedicate this thesis to my parents, respected teachers, siblings and friends for their love, support and care.

CERTIFICATE OF APPROVAL

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

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Abstract

Current research literature on project based organizations does not provide detailed insights on how projects can achieve greater performance. This research paper explores those accentuating factors that can be ascertained to contribute in improving project performance. Data was collected from 253 respondents working in various project based organizations across Pakistan. The study examined the impact of project manager's cultural intelligence on project performance. The results of the study indicate that cultural intelligence has significantly positive impact on project performance. The mediating role of managerial ambidexterity is also significantly positive between the relationship of cultural intelligence and project performance. The moderating role of intercultural group climate, however, has shown insignificant impact on the relationship between cultural intelligence and managerial ambidexterity. The study significantly contributes to the area of research specifically in the domain of project management and cultural intelligence. The implications, limitations and future directions are discussed.

Keywords: Cultural Intelligence, Managerial Ambidexterity, Intercultural Group Climate, Project Performance

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Abbreviations

CI	Cultural Intelligence
MA	Managerial Ambidexterity
IGC	Intercultural Group Climate
PP	Project Performance
PPM	Project Planning Methodologies
CFA	Confirmatory Factor Analysis
PM	Project Manager

Chapter 1

Introduction

1.1   Background of the Study

Project has been defined by (Turner, 1990) as, "An endeavor which organizes human, financial and material resources in a unique manner, to commence a distinctive scope of work, of requisite requirement, keeping in view time and cost constraint, so that beneficial change can be achieved through qualitative and quantitative objectives" (Turner and Müller, 2003). Research in the domain of project management is highly evident of the fact that change in the organization can be institutionalized effectively by projects (Hornstein, 2015; Crawford et al., 2014). (Parker et al., 2013) is of the view that institutionalizing projects as organizational change not only brings innovation but also compliments the success rate of the organization. Success of a project can be attributed to many factors including implicit and explicit interpersonal factors that involves cognitive ability of both manager and team, interaction level of members of a team and interaction harmony (Kelly and Barsade, 2001; Niven et al., 2009).

The unique or intricate activities are effectively handled through comprehensive tool of project management almost from last 30 years. The discipline of project management deals with unique or intricate activities, which are collectively called a project (Munns and Bjeirmi, 1996). Organizations in the modern era need rapid responses to ever changing internal and external environment. This need further

intensifies given the expectations from clients and competitiveness of the market and has resulted in constant search for creative and innovative approaches aiming to improve performance of project (Koch and Bendixen, 2005).

The most extensively researched topic in the domain of Project Management is project success, but the term "success" is more subjective in nature and its implication changes in different circumstances and for different individuals (Joslin and Müller, 2015). It is because of this reason recent researches have emphasized to broaden the canvass of success especially in the domain of project management and determinants of project success have been thoroughly studied in different contextual environments in which projects are being undertaken (Joslin and Müller, 2016). (Cavarec, 2012) is of the view that scope, time and cost is not the only criteria of separating failed projects from the successful projects. Many other factors contribute to the project success other than triple constraint. Primarily, the success of the project was measured against the level; project has achieved its intended purpose and formulated results in accordance with pre-decided constraints of scope, time and cost (Beleiu et al., 2015).

International collaboration of organizations is increasing as knowledge intensive nature of work is demanding. Globalization effect makes it need of an hour for every organization to survive competitive environment (Friedman, 2017). (Söderlund, 2010) mentioned that involvement of change elements is increasing in business projects. The change is not limited to inclusion of new technology but requires evident change in leadership effectively that enhances the probability of projects to be successful (Gilley et al., 2008; Jones et al., 2005; Turner and Müller, 2005). The organizations now need managers that can effectively manage diverse work groups (Jyoti and Kour, 2015). (Wellner, 2000) defined cultural intelligence as a tool that enables individuals to interact with individuals of other cultures effectively. It is an ability to perform effectively in the environments characterized by cultural diversity.

Organizations are continuously confronting the challenge of maintaining a balance between continuous improvement and innovation (Turner et al., 2012). These two terms are defined by (He and Wong, 2004) on the scale of requisite for exploitation

and exploration, where scale of exploitation takes into account terms as choice, refinement, execution, implementation, selection, efficiency, production', whereas scale of exploration takes into account terms as innovation, search, discovery, variation, flexibility, risk taking, play, experimentation. Ambidexterity addresses the part of literature where exploitation and exploration are used simultaneously to achieve both refinement and innovation.

Cultural diversity affects both individual performance and organizational performance in a constructive manner (Avery et al., 2008). It enhances the element of innovation, affect workplace environment positively as it allows people from different cultural backgrounds to interact, reduce cross cultural communication barriers, and also cause multi-cultural interactions to promote innovative work ideas of different cultures. Organizations with workforce having cultural diversity can positively affect commitment of employees, their morale and innovative capability to work (Goldman et al., 2006). It is significant to study the impact of cultural diversity because it impacts significantly on important areas like human resource management, organizational culture and employee relations among themselves and with manager (Ensher et al., 2001). Cultural diversity in project based organizations is considered innovative strength of project team. Intercultural group climate enhances the interaction probability of different cultural backgrounds, therefore, increasing the innovative and creative capability of team both holistically and individually..

1.2 Gap Analysis

Innovative work behavior is an important competency strengthening foundations of organizations and building up individual capability of employees. Innovative work behavior stems from cultural intelligence (De Waal, 2012). Cultural intelligence benefits organization both in operational and strategic domain. Application of cultural intelligence of both managers and employees in operations is manifested in the ways procedures are carried out in every business domain and perspective. Whereas, application of cultural intelligence in strategic management is manifested

in how organizations relate strategic objectives with firm's external environment and also manifested in the attainment of competitive advantage (Fink et al., 2017).

Project manager's cultural intelligence is relatively a new variable and so far cultural intelligence has been studied in the context of traditional organizations. The scope of work on this variable in the context of project based organizations and as an individual capability of project manager is relatively limited. A recent study by (Korzilius et al., 2017) highlighted the role of cultural intelligence in innovative work behavior, but this study utilizes the gap to study project manager's cultural intelligence role in enhancing project performance, making it one of the fewer studies in the particular domain.

While addressing this gap, the study also identifies potential mediator and moderator. The study suggests that managerial ambidexterity as a mediator along with the variable; project manager's cultural intelligence would be an important distinction in the domain of project management. However, inclusion of Intercultural Group Climate as a moderator is one of the unique domains which are still needed to be explored in the context of project management because competitive edge on which most of the organizations thrive in the modern era is creativity and innovation. Multinational organizations use work teams to accomplish tasks. Such organizations now prefer work teams to have members from culturally diverse backgrounds. This, collectively highlights the importance of intercultural group climate and creativity in projects and team communication (Li et al., 2017).

There is more room to study these variables in the context of Pakistan because study using such variables together would be very useful for meeting the competitive innovation of organizations working in Pakistan. The study will contribute significantly towards the existing literature as well as towards the research study in Pakistan for project based organizations. The moderating role of intercultural group climate between project manager's cultural intelligence and managerial ambidexterity is yet to be explored in project management's domain and contextual setting of Pakistan.

1.3   Problem Statement

In the present age of Globalization, project managers have to deal with diversity in workforce (Martin, 2014). The role played by project manager's cultural intelligence on the performance of the project is studied in a limited scope. Study on ambidexterity of an individual and as a mediating variable is also limited. Ambidexterity not only entails accomplishing appropriate levels of exploitation and exploration but also maintaining balance of both the levels. However, what sort of balance ensures success of a firm and to what degree the balance is required is subjective to organization and project type (Vahlne and Jonsson, 2017).

The world has become technically so advanced that every element of the project process is now being handled by technology intervention, this highly ignores the human factor involved and hence no measures are being taken to effectively enhance that. This study focuses on the human factor involvement in the domain of project management. The study sheds light on the element that how cultural intelligence of project manager impacts project performance. Ambidextrous ability of manager entails elements of both exploration and exploitation, the study focuses on how manager takes advantage of both exploration and exploitation in enhancing project performance and how intercultural group climate moderates the relationship between project manager's cultural intelligence and managerial ambidexterity.

This study focuses on project manager's cultural intelligence impact on project performance with mediating role of project manager's ambidexterity. The mediating role of project manager's ambidexterity to enhance project performance is yet to be explored in the domain of project management. The moderating role of intercultural group climate between project manager's cultural intelligence and managerial ambidexterity is yet to be explored in project management's domain and contextual setting of Pakistan. So, this is the novel domain which has not been studied yet along with all the variables (Project manager's cultural intelligence, Managerial Ambidexterity, Project Performance and Intercultural Group Climate).

1.4   Research Questions

In the light of above mentioned problems, the present study intends to find answers for below mentioned questions:

Research Question 1

Does project manager's Cultural Intelligence impact on Project Performance?

Research Question 2

Does Managerial Ambidexterity mediate the relationship between project manager's Cultural Intelligence and Project Performance?

Research Question 3

Does Intercultural Group Climate moderates the relationship between project manager's Cultural Intelligence and Managerial Ambidexterity?

1.5   Research Objectives

Research objective is to explore the relation between the variables according to the proposed model, that all of the variables are interrelated with each other to provide the desired results of increased project performance. In addition, intercultural group climate will be used as a moderator to identify the strength of the relation between project manager's cultural intelligence and managerial ambidexterity. The main aim is to illustrate the new dimension of cultural intelligence in project management along with managerial ambidexterity, in order to enhance project performance.

The specific objectives the study intends to explore are given below:

Research objective 1

To examine the relationship between project manager's Cultural Intelligence and Project Performance.

Research objective 2

To examine the relationship between project manager's Cultural Intelligence and Project Performance through Managerial Ambidexterity and moderating role of Intercultural Group Climate on the relationship of project manager's Cultural Intelligence and Managerial Ambidexterity.

1.6 Significance of the Study

The world has gradually transformed into a global village and the organizations maintain competitive edge through innovation. This study examines the personal dispositional abilities of project managers like cultural intelligence and ambidexterity to enhance the project performance because in the modern age of globalization projects have been the most popular way of performing tasks in a specific duration. So, concepts regarding cultural intellect and ambidexterity of project manager need to be clarified to make sure that the projects are completed successfully and have positive impact on the society in general. Overall, the cultural intelligence literature involves thorough research on performance of task in diverse settings of culturally varied workforce but fewer studies are conducted on cultural intelligence and leadership performance (Groves and Feyerherm, 2011).

Culture has emerged as one of the vital component of management studies in the past decades (Sheridan, 1992). Organizational culture is an important social characteristic that affects the overall workplace (Hartnell et al., 2011) and contributes effectively in influencing the responses towards organization (Ravasi and Schultz, 2006). Culture of an organization has considerable impact on project success through influencing employee's satisfaction towards their workplace environment and other values of the organization (Silverthorne, 2004; Lok and Crawford, 1999). Organizational behavior and process, both are essential for understanding general orientation of employees towards creativity and innovation (Küpers and Weibler, 2008). Although individual who have ability to manage their emotions and attitudes according to the organizational culture could contribute towards project performance more effectively (Vakola et al., 2004; Gunkel et al., 2016).

The study fulfills the theoretical gap existing in pervious literature because the research on project manager's cultural intelligence impact on project performance through managerial ambidexterity has not been studied in the field of project management within contextual settings of Pakistan. The study contributes positively in a productive manner towards achievement of the desired goals and milestones of the project along with active involvement of project manager making the best use of cultural diversity of the project team through his cultural intellect. The study sheds light on the element that how cultural intelligence of project manager impacts project performance. Ambidextrous ability of manager entails elements of both exploration and exploitation, the study focuses on how manager takes advantage of both exploration and exploitation in enhancing project performance and how intercultural group climate moderates the relationship between project manager's cultural intelligence and managerial ambidexterity.

Diverse and dynamic age of globalization has caused amalgamation of different cultures in the workforce. Cultural diversity broadly impacts the function of project team. Project team having cultural diversity have broad spectrum information advantage over project team which is not culturally diverse. Intercultural group climate not only widens the information horizon but also leads to effective team communication and cohesion that effectively contributes to the creative performance of the team altogether (Bouncken et al., 2016). Cross-cultural study of this kind keeping in view project manager's cultural intellect and ambidexterity will not only help in literature enhancement for scholars but also help organizations in Pakistan dealing with cultural diversity like embassies of different countries operating here, to effectively deal with culturally diverse workforce and enhance project performance.

1.7 Supporting Theory

Several theoretical perspectives have been presented by several researchers around the globe to underpin the phenomenon of culturally adapted human intelligence

and its relative impact on performance, however, Triarchic Theory of Human Intelligence encompasses explanation of all the related variables of the study. The theory was formulated by Robert J. Sternberg, supports the study and will help to understand the relationship between variables.

1.7.1 Triarchic Theory of Human Intelligence

Triarchic theory of human intelligence was put forward by Robert J. Sternberg, who is leading researcher in the domain of human intelligence. The theory was first of its kind by taking into account more detailed approach to cognitive studies. Sternberg terms human intelligence as "a cognitive ability that is focused towards purposive adaptation to, selection and modeling of, real-world environments relevant to a person's life" (Sternberg et al., 1985). The theory illustrates how soundly human beings handle changes in their environmental settings throughout life experiences. Sternberg's theory of human intelligence encompasses three sub theories, hence called triarchic theory of human intelligence.

The connection of human intelligence to external world of individual is explained by contextual (practical) sub theory; it takes into account the questions of what sort of behaviors are intelligent for whom and of where it is intelligent to exhibit such behaviors. In present study this part of theory relates to project manager's cultural intelligence as he interacts with external world of cultural diversity and seek appropriate behaviors to interact with diverse workforce. The contextual sub theory lay down the potential set of contents for behaviors that can be considered as intelligent. The sub theory also takes into account the fact that different cultures view different behaviors differently. A behavior which is appropriate in one culture might not be appropriate in another culture. This is where cultural intelligence of an individual plays role in understanding contextual behaviors of other individuals.

The connection of human intelligence to both the internal and external worlds of the individual is explained by experiential (creative) sub theory; it takes into account the question of when a particular behavior is intelligent. This sub theory

stipulates the relation between intelligence as revealed on a task or in a state of affairs, on the other hand, and level of familiarity with that particular task or a given state of affairs, on the other. The experiential (creative) sub theory relates to both exploratory and exploitative component of managerial ambidexterity. The experiential sub theory considers intelligence as an evolving system. Experience is considered linking bridge between individual's internal and external worlds of intelligence. The sub theory considers intelligence as evolving system because experience allows intelligent adaptation by configuring information from individual's internal and external worlds of intelligence.

The connection of human intelligence to the internal world of the individual is explained by componential (analytical) sub theory; it takes into account the question of how intelligent behavior is formulated within human brain. In specific, the sub theory lay down the prospective set of mental mechanisms that bring about intelligent behavior, irrespective of the specific behavioral interactions. This part of the theory relates to internal mental mechanisms of culturally diverse workforce. The three sub theories, taken together, can be used to understand individual differences, or who is intelligent. The analytical sub theory explains internal processes that occurs when behavioral responses, to a particular situation, are generated.

The theory proposed in this study can be viewed holistically to analyze how different aspects of intelligence work together as a system. Interaction between intelligence and the internal world relates to meta-cognitive components of brain activity, performance components and knowledge acquisition components. Interaction between intelligence and experience relates to cognitive capability of dealing with novelty and capability to mechanize information processing. Interaction between intelligence and external world relates to components of adaptation, shaping and selection. Adaption, shaping and selection are considered instrumental factors in determining human intelligence while its interaction with the external world. Triarchic theory of human intelligence is partly universal and partly relative in nature. Some components of the theory are objective in every cultural and behavioral aspect while some components are relative to the individual and kind of culture that particular behavior is being exhibited (Conway and Kovacs, 2015).

Chapter 2

Literature Review

2.1 Cultural Intelligence

(Earley and Ang, 2003), defined cultural intelligence in their book Cultural Intelligence: Individual Interactions across Cultures, as "a person's capability for successful adaptation to new cultural settings, that is, for unfamiliar settings attributable to cultural context".

Cultural intelligence is abstracted by many researchers according to their own perceptions and conceptualizations. The abstract is multi-faceted with cognitive, motivational and behavioral components having inter-disciplinary dimensions.

2.2 Managerial Ambidexterity

Ambidexterity, as a concept on individual level, is considered person's capability to be equally skilled with the use of both right and left hands. As a concept on organizational level, ambidexterity is defined as organization's capability to pursue two different things equally well (Raisch and Birkinshaw, 2008).

Ambidexterity, as a concept, holds versatility in it encapsulating different types of dualities that organizations attempt to pursue such as compliance and configuration (Graetz and Smith, 2005), effectiveness and flexibility (Gupta et al., 2006),

exploration and exploitation (Cao et al., 2009), and assimilation and approachability (Gulati and Puranam, 2009).

2.3 Intercultural Group Climate

Cultural context in which individuals as work groups' value diversity is referred to as intercultural group climate, employees feel more indulged in organization when diversity is valued principle and identify with diverse work groups when diversity is perceived as an important part of firm's value structure (Harquail and Cox, 1993). Cultural difference in work groups' has positive influence on work performance and enhances innovative capabilities at individual level that leads to positive outcomes in terms of both individual personality enhancement and organizational performance (Thomas, 1999).

2.4 Project Performance

The definition of project performance is subjective to stakeholder involvement with relevance to subjective measures involved in the project (Dai and Wells, 2004; Bosch-Rekveldt, 2011; Pollanen et al., 2017).

Performance with relevance to project is defined with different perspectives and extensive abstractions, however, performance is mostly defined by many researchers in compliance with basic constraints of time, cost, scope and quality (Meyer, 1994). (Boyne and Gould-Williams, 2003) is of the view that alongside basic constraints, other factors like efficiency, organizational impact and societal impact also impact performance of the project.

2.5 Cultural Intelligence and Project Performance

The part of human intelligence that deals interaction with the external world allow individuals to adapt adequately with cultural aspects that are new to his/her

conscious and this particular procedure is exhibited through three facets including cognitive, motivational and behavioral elements (Kroeber and Kluckhohn, 1952; Markus and Kitayama, 1991). The cognitive or meta-cognitive facet takes into account individual's personality and his perception regarding self and society, which is referred to as self-concept. Individual's self-concepts functions mostly on the basis of his social interaction and position being held in society (Anicha et al., 2012). Meta-cognitive component is an explanatory phenomenon that mediates the relationship between important processes of intra and inter-personal in nature. Intrapersonal interactions are psychological interactions that reflects human cognitive capabilities whereas interpersonal interactions are social interactions including perception of individual regarding society (Ang et al., 2007). Meta-cognitive element involves knowledge domains entailing perception an individual holds regarding other individuals as thinking entities, kind of information being acquired by human brain and strategies being implemented to attain required goals and results (Earley et al., 2007).

Motivational facet of cultural intelligence takes into account person's intrinsic motivation to utilize intelligence to produce appropriate responses. Motivational facet requires individual to use knowledge and intelligence to create responses in the environment which are culturally appropriate and approved (Chen et al., 2010). Cognitive facet is very important to cultural intelligence because it allows individual to adapt or reshape cultural situations using flexibility of one's conscious (Crowne, 2013). One of the aspects of flexibility in adjusting in new cultures require abandoning already existing concepts of human living, civilizations and patterns of socializing. Intrinsic motivation allows generating appropriate cultural responses to new complex conditions along with cognitive facet of cultural intelligence (Eken et al., 2014). High cultural intelligence entails logical reasoning skills to make individual capable of ascertaining important stimuli from the new environmental settings. CQ involves person's norms and values too as they guide social interactions and group-level communications (Engle and Crowne, 2014).

The behavioral facet of cultural intelligence entails kinds of behaviors person indulge in exhibiting cultural responses (Black et al., 1991). The facet suggests

that adaptation not only involves decisions regarding what and how to do (cognitive facet) or where to direct motivation to (motivational facet) but also what behaviors are appropriate with what amount of motivation in any given circumstances (Lievens et al., 2003). These specific behaviors together with cognitive and motivational facets constitutes total of person's cultural intelligence. Behavioral facet requires acquiring or adapting appropriate behaviors for adjustments in new culture. It also entails indirect ways of exhibiting behaviors that are linked with cultural intelligence (Ng and Earley, 2006). Cultural intelligence when exhibited in its fullest meanings not only requires acquiring and adapting behaviors in new cultural settings but also determination to improve acquired behaviors (Schmidt and Hunter, 2000).

Performance is an outcome of knowledge, competence, capability and persistence aimed at particular prescribed behavior (Nahod and Radujković, 2013). The phenomenon of performance is positively associated with cultural intelligence (Borman and Motowidlo, 1993; House et al., 2004; Gelfand et al., 2007). Individuals that are well aware of their surroundings (meta-cognitive facet), know what kind behavior to be exhibited to a particular cultural response (behavioral facet) which is created using intrinsic motivation (motivational facet) have high performance levels in situations characterized by cultural diversity. The motivational and behavioral facets are positively associated with better project performance (Chang et al., 2013). This relationship was also revealed in one of studies performed in United States where motivational facet of individual's cultural intelligence was found to be positively associated with cultural sales (Huff et al., 2014).

High levels of cultural intelligence breeds intrinsic motivation in culturally diverse contexts, strengthening individual's determination towards performance of his job in a given culturally diverse context (Kodwani, 2012). Similarly, behavioral facet allows individual to be more flexible in exhibiting verbal and non-verbal behaviors as demanded by cultural settings appropriately leading to higher individual performance particularly and project performance holistically. Effective interaction with people from different cultural backgrounds ensure effective capitalization of intelligence culturally diverse work settings hold (Stone-Romero et al., 2003). Culturally

intelligent individuals are capable of drawing inferences and generating responses appropriate for culturally diverse setting encapsulating cognitive, behavioral and motivational facet decreasing misunderstanding regarding role expectation and eventually enhancing performance (Farah and Vuniqi, 2012).

Cultural Intelligence is relatively recent construct in project management literature and has been considered as learning ability for managers around the globe (Dunning and Lundan, 2009). Cultural intelligence was assembled initially to determine factors influencing a person's capability to successfully adapt his/her personality in cultural settings (Earley and Ang, 2003). In cross-cultural interactions cultural intelligence is not only a personality disposition factor but also a scale to measure individual's competencies ahead of stable differences (Eisenberg et al., 2013b).

Cultural Intelligence is one of the components of overall human intelligence composition other being quantitative and emotional intelligence (Sternberg and Determan, 1986; Alon and Higgins, 2005). In the domain of project management, project manager's cultural intelligence is one of the effective tools to enhance individual and project performance (Beck et al., 2008). Cultural intelligence has positive impact on job and task performance (Ramalu et al., 2010; Chen et al., 2011; Ramalu et al., 2012).

Therefore, this suggests the first hypothesis.

H:1 *There is positive association between project manager's cultural intelligence and project performance.*

2.6 Cultural Intelligence and Managerial Ambidexterity

The concept of ambidexterity revolves around main perspectives of exploitation and exploration that organizations require in the recent competitive era of globalization to succeed. Activities of exploration and exploitation require different set of human and technical capabilities to perform them (Swart et al., 2016). Exploration

activities are linked with increasing variance accompanied with trial and error methods to enhance learning by doing processing capabilities, whereas, exploitation activities are linked with decreasing variance accompanied with standardization processes to enhance problem-solving capabilities. Exploitation strengthens the past principles and procedures of organization and exploration paves way for new innovative abilities and approaches that are different from the organizational past (Chebbi et al., 2017).

Ambidexterity at individual level allows managers to simultaneously pursue exploratory and exploitative activities in a single business unit categorized as contextual ambidexterity. This ambidextrous capability is linked with cultural intelligence of the individual, it has been argued that cultural intelligence breeds innovative capabilities of individuals making them creatively competent as compared with individuals having low levels of cultural intelligence (Xing et al., 2016). Researchers have explicitly implied that innovation levels either incremental or radical are achieved in organizations incorporating cultural diversity as one of the core values of its culture (Heumann et al., 2011). Studies of structural and contextual types of ambidexterity suggests that cultural intelligence of leader is one of the critical factors in enabling innovative ambidexterity (Brion and Mothe, 2016).

Ambidexterity has emerged as a vibrant field in the domain of organizational and management studies (Wan et al., 2017; Yu et al., 2018). More recently scholars have started to examine ambidexterity from cultural perspective (Filippini et al., 2012). Their findings suggest that integration of cognitive and behavioral component with ambidexterity is strengthen within environments characterized by cultural dynamism and more often inculcate high levels of cultural intelligence (Kauppila, 2010). Therefore, organizations should inculcate cultural diversity in their core values as it enhances the element of innovation and creativity which pressing need of an hour (McCarthy and Gordon, 2011). In the domain of project management multicultural collaborations to inculcate ambidexterity is one of the major determinants of success or failure of project (Pellegrinelli et al., 2015). One

of the main conceptions project management entails is ability to work with people. The ability to work with people from multiple cultural backgrounds is considered one of the capabilities of successful project managers (Liu and Leitner, 2012). Project manager, whether heading portfolio, program or project need to assemble teams form different cultural backgrounds and configure project team performance towards a common goal (Liebowitz and Megbolugbe, 2003). Cultural intelligence helps in dealing with cultural diversity effectively ensuring the success of the project. The recent trend of globalization have made organizations to adopt cultural diversity in organizational culture to overcome shortages of local opportunities, so it has become mandatory for project managers to be able to configure efforts of culturally diverse project teams towards creativity and innovation (Hong, 2013).

Ambidexterity has recently become the focus of research in manage ment (Turner et al., 2015). It involves exploiting existing knowledge and exploring new innovative ideas to enhance the creativity and innovation (Eriksson, 2013). Research indicates that ambidexterity when exhibited on individual level leads to creativity and innovation in the task being performed (Wu and Wu, 2016). The element of ambidexterity is well refined in the organizational settings having cultural diversity providing opportunities to diverse workforce to express their innovative ideas and proper channel to exploit and explore different horizons (Baškarada et al., 2016).

For a leader to be successful in any contextual setting his knowledge about the cultural background of the workforce and ability to trigger innovation on any organizational level is must (Chua et al., 2015) and for exhibiting it properly the environmental factors do play important part. Ambidexterity on the individual level along with many other factors stems from cultural intelligence of the manager.

Hence my second hypothesis can be stated as:

H2: *There is positive association between project manager's cultural intelligence and managerial ambidexterity.*

2.7 Managerial Ambidexterity and Project Performance

The concept of ambidexterity was first coined by (Duncan, 1976) in one of chapters of his book called The ambidextrous organization: Designing dual structures for innovation, while describing dual structures that organizations employ to manage activities that require different strategies and managerial abilities. (Tushman and O'Reilly III, 1996) added further to the literature of the concept in an article published in California Management Review, focusing on understanding that how companies can maintain both evolutionary and revolutionary processes of change equally well and simultaneously. They approached the concept in the same way approached by (Duncan, 1976), keeping dual processes as structurally separate.

The empirical research in the recent years on ambidexterity suggests that since the growing age of globalization and competitiveness, ambidexterity when implemented sequentially might be ineffective, for rapid change to be incorporated exploratory and exploitative change processes must be implemented simultaneously (Schulze et al., 2008). These two terms are defined by (March, 1991) on the scale of requisite for exploitation and exploration, where scale of exploitation takes into account terms as choice, refinement, execution, implementation, selection, efficiency, production', whereas scale of exploration takes into account terms as innovation, search, discovery, variation, flexibility, risk taking, play, experimentation.

Exploitation change process when implemented sequentially can bring about short-term benefit but long-term benefits will be compromised consequently. Similarly, explorative change process in sequential implementation can be flawed in different contextual settings, so both change processes can be implemented simultaneously for effective outcomes (Levinthal and March, 1993). The basic problem now organizations face is in maintaining balance between requisite exploitation processes to ensure current viability and exploratory processes to ensure future viability. Implementing both exploitative and exploratory change processes simultaneously can enhance financial performance and durability eventually leading to increased customer satisfaction (Jansen et al., 2008; Geraldi et al., 2011).

The concept of ambidexterity is mostly understood on organizational level, but limited research is available on how managers can use these ambidextrous strategies on micro level to achieve ambidexterity (Cohen et al., 2007). A review on prior research suggests that research on individual-level ambidexterity is limited in literature (Taylor and Helfat, 2009; Lavie et al., 2010). Ambidexterity can be manifested at both organizational and individual level. At organizational level, exploration and exploitative change processes are handled by same or different business units depending on the type of ambidexterity being implemented (Andriopoulos and Lewis, 2009). At individual level, managers engage in exploratory and exploitative strategies to ensure ambidexterity. Some managers engage simultaneously while some implement exploratory and exploitative activities sequentially. Managers who are ambidextrous maintain more comprehensive chain of information flow than managers who are not ambidextrous (Benner and Tushman, 2003). The ambidextrous capability of a manager is contextual and varies across different organization types. Individual-level ambidexterity contributes towards overall ambidexterity of an organization along with other factors.

The understanding, that exploitative and exploratory change processes can be sequential or can be implemented simultaneously without a trade-off between the two, depends on type of ambidexterity (Hughes et al., 2007). Temporal ambidexterity reflects on consideration that exploitation and exploration are separate in time in which organization move from one dominant mode to the other (Wang and Rafiq, 2014). Structural ambidexterity also reflects on understanding that exploitation and exploration are sequential in nature, where one organizational unit focusing on exploitative change process while other unit focusing on explorative change process, both units are later integrated at management level. Contextual ambidexterity takes into account behavioral aptitude of an individual to engage in exploitative and exploratory activities simultaneously across an organizational unit, which has in built structures and systems allowing individuals to divide their time equally between both the activities (Zaidi and Othman, 2015).

Managerial ambidexterity gets evident from primary function of senior management of allocating resources between new and existing businesses of the firm.

Overall organizational tendency towards exploitation or exploration is decided by manager's priority of exploitative or explorative change process (Rothaermel and Alexandre, 2009). If an organization pursues exploitative strategies means that its managers have increased tendency towards exploitative change process, likewise, if an organization pursues explorative strategies means that its managers have increased tendency towards explorative change process. However, organizations pursuing contextual ambidexterity have systems and procedures designed so that individuals are focused towards both, exploitative and explorative strategies simultaneously (Günsel et al., 2018).

In the recent age of technological advancements, innovation is the key element organizations are relying on to have competitive edge over competitors. Firms have to develop both exploitative and exploratory innovativeness to keep up with the latest trends and maintain market position (Campanella et al., 2016). (Kang and Snell, 2009) are of the view that organizational innovativeness stems from its human resource base and success of its operations depends on the innovative capability of the human capital. However, limited insight is available on how individuals attain explorative and exploitative innovative capabilities to make organization perform in innovative domains (Faisal Ahammad et al., 2015).

Empirical research on ambidexterity literature reveals that is it advantageous for organizational, business unit and team performance (Gibson and Birkinshaw, 2004; Jansen et al., 2012) however, similar evidence in the domain of project based organizations is limited. In addition to exploitative and exploratory behaviors, ambidexterity promotes organizational learning. Organizational learning along with individual innovative capabilities allows better individual performance in particular and organizational performance in general (Kobarg et al., 2017).

Hence my third hypothesis can be stated as:

H3: *There is a positive association between managerial ambidexterity and project performance.*

2.8 Mediating role of Managerial Ambidexterity between Cultural Intelligence and Project Performance

Project management on international level requires project manager to deal with cultural diversity and differences, for that project manager needs to effectively manage project teams and keeping in view of recent trend of attaining competitive edge, also have to attain innovative capabilities to enhance project performance (Aytemiz Seymen, 2006). The link of cultural intelligence to enhance project performance is mediated by project manager's ambidexterity. Ambidexterity entails ability to refine existing knowledge and to overcome existing knowledge deficiencies by creating new knowledge simultaneously, in case of contextual ambidexterity (Campanella et al., 2016). Majority of the research literature is available emphasizing the role of ambidexterity on organizational level, very few studies are available on role ambidexterity on managerial and social level. This study fills the gap by focusing the role of ambidexterity on managerial and studying its mediating role between cultural intelligence and project performance.

According to traditional definition of a project being a temporary endeavor it is undertaken to create unique product or a service, keeping in view the constraints of time and cost project requires new activities to be inculcated more as compared with repetitive ones (Burke, 2013). This makes exploration main focus of the project activities whereas for making project management integral part of an organization, which is need of an hour, exploitation activities play part, maintaining standardization of procedures. Institutionalization of project management in organization requires exploratory and exploitative activities to be performed simultaneously (Holmqvist, 2004). The successful institutionalization requires cultural intelligence of project leaders to inculcate the element of ambidexterity so that success rates of projects can be increased.

The discipline of project management inculcates conception of ambidexterity through two models .i.e. traditional model and flexible model (Lenfle, 2008). Traditional

model focus on standardization procedures and values for the initiation of phases of the project. Anticipation for uncertainties and opportunities is made on the basis of knowledge and experience of project manager. Alternatively, flexible model focus on exploratory ways to handle phases of the project and encourages development of innovative ways of doing things. Traditional model focuses on exploitative set of activities while flexible model focuses on exploratory set of activities. Multiculturalism and unexpected nature of events makes flexible model more relevant to be applicable in the face of recent changes in the domain of project management. Traditional models are more relevant in institutionalizing project management within organization (Brady and Davies, 2004).

Organizational culture is significant to achieve ambidexterity, in order to cope up with ever changing requirements organizations need to be ambidextrous to inculcate innovation and standardization (Menor et al., 2002). Culture of the organization is strengthen by the shared values possess by its members and through the way innovative processes are being carried out. Cultural intelligence of a project leader allows team members to work innovatively to ensure project success. Ambidextrous capability of project manager refines decision making ability and allow him to make project team focused on a common goal. Ambidexterity becomes foundation of an organizational culture when organization values both creativity and discipline (O'Reilly III and Tushman, 2008).

Intelligence is considered as a capability of human brain to respond to complex and new situations in flexible manner. Intelligence level increases as humans' social interacting phenomenon increases and intelligence level is positively associated with increased social interaction in different cultures. The cultural hypothesis reaffirms the notion that intelligence level increase as social interaction levels increases allowing more explorative learning (van Schaik and Burkart, 2011). Individual ability of carrying out explorative and exploitative activities enables managerial effectiveness and ability to perform job or task more successfully (Yusof and Othman, 2016).

Recent world economic crisis have made organizations to make adaptability with

innovation their key formula to success and retain competitive edge over the competitors. Recent shift is towards aligning exploitative innovation with explorative innovation along with workforce having cultural diversity supervised with cultural intellect to ensure success of an organization (Woods, 2016).

Hence my fourth hypothesis would be:

H4: *Managerial Ambidexterity plays a mediating role between Project Manager's Cultural Intelligence and Project Performance.*

2.9 Moderating Role of Intercultural Group Climate between Cultural Intelligence and Project Performance

In the modern era of globalization, there is a paradigm shift in which cultural diversity in workgroups is considered economical and beneficial for organizational performance. Heterogeneity among the members of the workgroup on the basis of cultural backgrounds leads to group cohesiveness that leads to increased quality of work and hence, project performance (Gupta et al., 2002). Intercultural group climate is shaped by many situational factors, cultural values and individual perspectives. Decision making capabilities of the members of the workgroup are mostly shaped by the cultural backgrounds and individual perspectives leading to comprehensive knowledge and experience based decision making (Audretsch et al., 2010). One of the prominent traits of intercultural group climate is self-construal that refers to the degree to which members of workgroup conceive themselves as independent from others and interdependently linked with other members of the group (Wu and Chiang, 2007).

Research in the domain of cultural diversity suggests that organizations should inculcate diversity in the workgroups to enhance workgroup performance and organizational productivity (Damelang and Haas, 2012). Intercultural group climate of workgroup enhances group performance because of idiosyncratic values and preferences maintained by individual members (De Vita, 2005). Diversity inculcates

typically demographic differences of sorts among the members of the workgroup. Members identify with different cultural backgrounds collectively forming intercultural group climate among workgroup (Alesina and Ferrara, 2005). Intercultural group climate enhances innovative capabilities of individuals ultimately leading to creative problem solving and enhanced performance both on individual and organizational level. Cultural diversity breeds innovation and cause market share of an organization to grow (Ceschi et al., 2014).

The concept of cultural diversity can be viewed from two perspectives that breeds intercultural group climate, one is inherent diversity and the other is acquired diversity. Perspective of inherent diversity inculcates traits individuals are born with such as gender, sexual orientation and ethnicity. Perspective of acquired diversity inculcates traits individuals gain from experience such as experience individual gain while working in another country helps in appreciating cultural differences (Nederveen Pieterse et al., 2013). Intercultural group climate creates an environment for innovation by valuing cultural differences and allowing ideas from different cultural backgrounds to the surface. Cultural diversity pools talents from different cultural backgrounds that add abundance of knowledge, experiences and ethnic backgrounds to workgroups and organizations (Taylor, 2014).

The usability of project management practices in ever changing era of globalization has dramatically increased over time. Organizations adopted project management practices and procedures to deliver work packages keeping track of cost consciousness and monitoring, furthermore to use limited human resource asset to meet customer requirements and to attain competitive edge in the market (Zwikael et al., 2005). Along with traditional project management competencies, project success requires effective communication and shared understanding among the project team members. Management of project related activities require dynamic integration of interpersonal, cognitive and technical competencies of project manager and team members (Marques et al., 2011). Intercultural group climate among the members of the project team congregate interpersonal, technical and cognitive skills form different cultural backgrounds contributing positively towards team cohesiveness, exploratory and exploitative capability of project manager and overall

performance of the project (Bledow et al., 2009).

Interaction among the culturally diverse workforce cause knowledge spillover and generates new productive research ideas. Theoretical literature on effects of intercultural group climate suggests positive association of cultural diversity among workforce and innovation (Nemanich and Vera, 2009; Umans, 2012; Wang and Rafiq, 2014). (Ottaviano and Peri, 2006) are of the view that skills of culturally diverse workforce complement skills of native workforce, positively impacting performance and productivity. Organizations thrive on strong diversity climate to attain competitive edge in the modern era of globalization (Parker, 2014). Strong diversity climate of an organization is characterized by freedom of expression employees from different cultural backgrounds exercise in expressing their cultural thoughts and exhibiting cultural behaviors in the workplace.

In the recent era, researchers have focused their efforts to study effects of intercultural group climate in the workforce. The variable has still not achieved its potential as methodological approach (Perry et al., 2013). Cultural diversity fosters the group behavior positively and effectively enhances the work group productivity. Intercultural group climate positively impacts the decision-making ability of the group (Oetzel, 2017).

When there is intercultural group climate at workplace; it affects employees feelings towards work and manager positively (Triana et al., 2015) enhancing both managerial and organizational performance. Empirical studies have shown positive impacts of intercultural group climate on job performance of employees in particular and organizational performance in general (Burke, 1991; Valentine et al., 1999; Hopkins, 1980; Ensher et al., 2001).

Hence my fifth hypothesis would be:

H5: *Intercultural Group Climate moderates positively the relationship between project manager's cultural intelligence and managerial ambidexterity; such that if intercultural group climate is high then the relationship between project manager cultural intelligence and managerial ambidexterity would be strengthened.*

2.10   Research Model
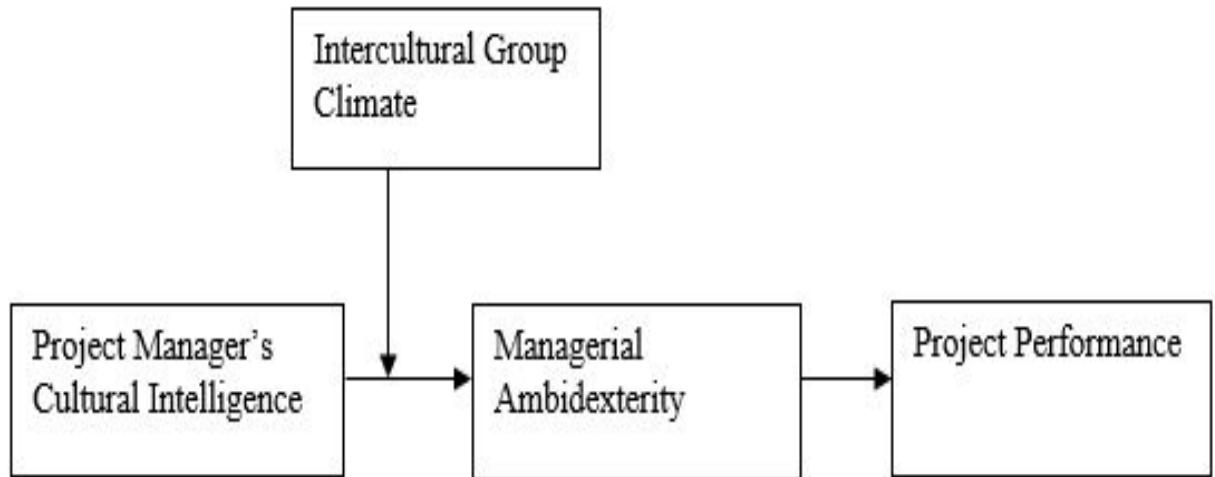
FIGURE 2.1: *Research Model of PM's cultural intelligence on project performance through managerial ambidexterity: Moderation of intercultural group climate*

2.11   Research Hypothesis

H$_1$: There is positive association between project manager's cultural intelligence and project performance.

H$_2$: There is positive association between project manager's cultural intelligence and managerial ambidexterity.

H$_3$: There is a positive association between managerial ambidexterity and project performance.

H$_4$: Managerial Ambidexterity plays a mediating role between Project Manager's Cultural Intelligence and Project Performance.

H$_5$: Intercultural Group Climate moderates the relationship between project manager's cultural intelligence and managerial ambidexterity; such that if intercultural group climate is high then the relationship between project manager cultural intelligence and managerial ambidexterity would be strengthened.

Chapter 3

Research Methodologies

The following chapter hold details about all the procedures and methods applied in this research to get the authentic results. The discussion encompasses particulars regarding type of study, research philosophy, unit of analysis, population, sample, sampling technique, sample characteristics, instrumentation, statistical tools, pilot testing, reliability scales analysis and data analysis of all the variables and items included in this research.

3.1 Research Design

3.1.1 Type of Study

This research is used to highlight the significance of project manager's cultural intelligence on performance of project, for that matter cross-sectional study has been conducted. For this purpose, project based organizations of Pakistan has been targeted to get the required data and authentic results. Initially 350 questionnaires were distributed among the selected sample but 253 veritable responses were received. The selected sample of the study constitutes of total population of project based organizations of Pakistan. The results of study revealed by the selected sample is to be generalized on the entire population of Pakistan.

3.1.2   Research Philosophy and Quantitative Research

This research is based on the hypothetical deductive research method which is entirely based on the philosophy of determinism, which inculcates previous research and existing theories to demonstrate and support our hypothesis which will then be tested empirically for authentication of the proposed hypothesis of the study. The hypothetical deductive model or method is a predicted explanation of scientific method. According to this method, as the name suggests there are two parts. In hypothetical part hypothesis is proposed for a test and in deductive part test consequences are inferred from hypothesis. Then the results inferred from hypothesis are compared with observable or experimented data to pass or fail the verdict. If the inferred hypothesis is antagonistic to observable data then prediction is deemed as falsified and if the inferred hypothesis is not antagonistic to observable data then hypothesis substantiates the theory and prediction is deemed as pass.

Quantitative methods of research are used to reach a large scale of population. Therefore, this research have also utilized quantitative research method to collect quality data for the purpose of associating variables to each other and for demonstrating the nature of relationship between the variables under study.

3.1.3   Unit of Analysis

Unit of analysis is normally the most important characteristic in any research study. In a research study, unit of analysis can range from an individual to different groups, organizations, cultures etc. Since this study is designed on bilateral relationship i.e. the impact of cultural intelligence of project manager on project performance, therefore the unit of analysis for this study were the employees of project based organizations explicitly companies having cultural diversity in the workforce.

In order to assess the impact of cultural intelligence of project manager through managerial ambidexterity, study needed to approach the specific sector of project based organization which specifically entails cultural diversity among workforce.

3.2   Population and Sample

Since the present study seeks to focus on the development sector projects entailing cultural diversity in Pakistan, the population of the study is the managers, subordinates and the stakeholders (end-users) of this sector. As project based organizations are the emerging source of competitive advantage for Pakistan, in this way this sector is contributing in a massive way to attract other foreigners to invest in Pakistan, which in return is increasing the cultural diversity in the workforce and global recognition of Pakistan as a new emerging and developing country.

For the current study, data was obtained from ten project based organizations operating in Islamabad, Rawalpindi, Lahore and Karachi. These include both national level and international level project based organizations including cultural diversity in workforce, running various projects in the field of infrastructure, healthcare, education, energy, hydropower, social services etc. These projects include capacity building of personnel, reforming of technical and vocational education and basic education, saving the children, facilitating the migrants and the returnees back in the country, establishment of hospitals and centers of excellence for teacher and youth trainings, providing medical services and much more like USAID, UNDP and CPEC etc. The data is collected from the project teams and the relevant stakeholders of the projects.

3.3   Sample and Sampling Technique

Being mindful of the fact that it is generally difficult to collect data from the entire population due to certain constraints for instance limited time and resource scarcity. Sampling is the commonly used procedure for data collection. For this, a specific group of people are chosen that are the true representatives of the whole population. For the present study, generally, only project based organizations of Pakistan were approached. Ten project based organizations were being approached and the data was collected.

The data on independent variable (i.e., project manager's Cultural Intelligence) dependent variable (i.e. Project Performance), moderator (i.e., Intercultural Group Climate) as well as the mediating variable (i.e., Managerial Ambidexterity) were reported by the projects core team members who had a direct impact on the project performance, including the project leaders, team leaders, and advisors/experts. The sample mainly consists of managerial and operational level of different organizations and also the counterparts who actually benefited from the project.

The sample specifically includes the project based organizations having cultural diversity in the workforce and there exists manager-employee heterophily such that employees and managers are from different cultural backgrounds e.g. embassies of different countries working in Pakistan. The sampling technique utilized is convenience sampling technique, which is a type of non-probability sampling technique and data is collected on the basis of ease of availability of data. Therefore, convenience sampling is the most suitable technique to be used in this research because through this technique randomly data can be collected from project base organizations of Pakistan, which will effectively depict the true picture of whole population in explaining the impact of project manager's cultural intelligence on project performance through managerial ambidexterity and intercultural group climate.

Self-administered questionnaires were distributed among the project based organizations. Respondents were informed that their information will be confidential and will be only used for academic purposes through cover letter. They were asked to answer the survey questions as accurately as possible by ensuring the privacy of their reactions and namelessness so the respondents don't hesitate to fill in the survey decisively. Almost 350 questionnaires were distributed.

3.4   Sample Characteristics

The demographics considered in this study are; project manager's and employee's age, their dynamic experience in the project based organizations and information linked to gender and qualification.

Sample characteristics are explained as follows:

3.4.1 Gender

Gender is an element which remains in highlights for the purpose to maintain gender equality, so it is also considered as the important element of the demographics because it differentiates between male and female in a given population sample. In this study, it has been tried to make sure the privilege of gender equality but still it has been observed that ratio of male mangers is considerably greater than the ratio of female mangers.

TABLE 3.1: Gender Distribution

Gender	Frequency	Percent	Valid Percent	Cumulative Percent
Male	194	76.7	76.7	76.7
Female	59	23.3	23.3	100
Total	**253**	**100**	**100**	

Table 3.1 represents the gender composition ratio of the sample in which 76.7% were male and 23.3 % were female. The male percentage of male respondents was high.

3.4.2 Age

Age is considered as one of the demographics, to which respondents sometimes feel uncomfortable to disclose openly. So, for the convenience of respondents, scale/range was used to collect information regarding their age.

Table 3.2 shows the composition of the sample with reference to age groups. 17.0% of respondents were having age between the ranges of 18 - 25 years, 52.2% respondents were having age between the ranges of 26 - 33 years, 20.6% respondents were having age between the ranges of 34 - 41 years, while 9.5% respondents were having age between the ranges of 42 - 49 years and just 0.8% respondents were more than 50 years. In this study, most of the respondents lie in the ranges of 26 - 33 years of age.

TABLE 3.2: Age Distribution

Age	Frequency	Percent	Valid Percent	Cumulative Percent
18 − 25	43	17	17	17
26 − 33	132	52.2	52.2	69.2
34 − 41	52	20.6	20.6	89.7
42 − 49	24	9.5	9.5	99.2
Above 50	2	0.8	0.8	100
Total	**253**	**100**	**100**	

3.4.3   Qualification

Education is the major element which contributes towards the prosperity of the whole Nation and it is also the basic need of the hour to compete globally. Hence after gender, qualification/education is another vital dimension of the demographics.

TABLE 3.3: Qualification Distribution

Qualification	Frequency	Percent	Valid Percent	Cumulative Percent
Matric	3	1.2	1.2	1.2
Intermediate	10	4	4	5.1
Bachelor	68	26.9	26.9	32
Masters	131	51.8	51.8	83.8
MS/M. Phil.	38	15	15	98.8
Ph. D	1	0.4	0.4	99.2
Post Ph. D	2	0.8	0.8	100
Total	**253**	**100**	**100**	

Table 3.3 represents the qualification of the respondents, 1.2% were Matric qualified, 4.0% were Intermediate qualified, 26.9% were Bachelors qualified, 51.8% were Masters qualified, 15.0% were MS/M. Phil qualified, 0.4% were Ph. D qualified and 0.8% were Post Ph. D qualified. The large number of responded were having a Master's degree.

3.4.4 Experience

To collect information regarding the experience of the respondents, also different ranges of experience time period were developed so that every respondent can easily indicate the specific tenure of their experience in the relevant field of projects.

TABLE 3.4: Experience Distribution

Experience	Frequency	Percent	Valid Percent	Cumulative Percent
0 − 5	97	38.3	38.3	38.3
6 − 10	106	41.9	41.9	80.2
11 − 16	44	17.4	17.4	97.6
17 − 22	4	1.6	1.6	99.2
Above 29	2	0.8	0.8	100
Total	**253**	**100**	**100**	

Table 3.4 represent that 38.3% of the persons were having job expertise ranging from (0 - 5) years, 41.9% of persons were having job expertise ranging from (6 - 10) years, 17.4% of persons were having job expertise ranging from (11 - 16) years, 1.6% of respondents were having job expertise ranging from (17 - 22) years, and 0.8% of respondents were having work expertise more than 29 years. Most of the respondents were lying in the work expertise of (6 - 10) years.

3.5 Instrumentation

3.5.1 Measures

This study consists of closed ended questionnaire adopted from different sources which were used for measuring four variables. Questionnaires were administered to the various groups of employees and managers of the project based organizations that have been visited during questionnaire distribution period. Questionnaires were also distributed online to the websites of project based organizations for quick response. Employees/managers as respondents filled the questionnaires with five sections in this study: demographics variables (gender, age, qualification

and experience), Project Manager's Cultural Intelligence, Managerial Ambidexterity, Project Performance, and Intercultural Group Climate. The responses were tapped using a 5 point likert scale where 1 represents "strongly disagree" and 5 represents "strongly agreed", unless otherwise stated. Questionnaires also covered demographic variables like Gender, Age, Qualification and Experience.

350 questionnaires were distributed in total but only 300 were received. But the actual numbers of questionnaires used for the analysis of data for demonstrating the results were 253. The discarded questionnaires out of 300 questionnaires were those which were not having the complete information or many of the questions were unfilled in those questionnaires hence making them not appropriate for the study.

3.5.2 Project Manager's Cultural Intelligence

Questionnaire for Project Manager's Cultural Intelligence is constructed by (Thomas et al., 2015). Total items are 10 out of which 2 are the knowledge items, 5 are the skill items and 3 are metacognition items. The responses were tapped using a 5 point likert scale where 1 represents "not at all" and 5 represents "Extremely well". Some of the items of scale are .e.g. "I know the ways in which cultures around the world are different" (Knowledge Item), "I can change my behavior to suit different cultural situations and people" (Skill Item), "I am aware of the cultural knowledge I use when interacting with someone from another culture" (Meta-cognition Item) etc.

3.5.3 Managerial Ambidexterity

Questionnaire for Managerial Ambidexterity is constructed by (Mom et al., 2009). Total items are 14 out of which first 7 are the exploratory items and last 7 are exploitative items. The responses were tapped using a 5 point likert scale where 1 represents "to very small extent" and 5 represents "to very large extent" to measure the extent of ambidextrous capabilities being exhibited by project manager. Some of the items of scale are .e.g. "Searching for new possibilities with respect to

products/services, processes, or markets" (Exploratory Item), "Activities which you carry out as if it were routine" (Exploitative Item) etc.

3.5.4 Project Performance

Questionnaire for Project Performance is constructed by (Gu et al., 2014). Total items are 8. The responses were tapped using a 5 point likert scale where 1 represents "strongly disagree" and 5 represents "strongly agree" to measure whether project delivers high quality deliverables in an efficient manner. Some of the items of scale are .e.g. "Projects are completed on time", "Projects met budget requirements", "Projects met expectations" etc.

3.5.5 Intercultural Group Climate

Questionnaire for Intercultural Group Climate is constructed by (Luijters et al., 2008).Total items are 6. The responses were tapped using a 5 point likert scale where 1 represents "strongly disagree" and 5 represents "strongly agree". The items of scale are: "In our project we think positively about cultural differences of colleagues", "In our project we understand and accept different cultures", "In our project we recommend working with people with cultural different backgrounds", "Differences in cultural backgrounds are discussed openly in our project", "In our project we take differences in traditions and habits (like religion, celebrations) into account" and "In project we see the advantage of differences in cultural backgrounds of employees".

<div align="center">TABLE 3.5: Instruments</div>

Variables	Source	Items
Cultural Intelligence (IV)	Thomas et al. -2015	10
Managerial Ambidexterity (Med)	Mom, Van Den Bosch & Volberda -2009	14
Project Performance (DV)	Hoffman, Cao & Schniederjans -2014	8
Intercultural Group Climate (Mod)	Luijters, van der Zee & Otten (2008)	6

3.6   Statistical Tools

At very first stage scale reliability and validity was tested by doing CFA (confirmatory factor analysis) by using AMOS and model was found good fit because CFI, GFI, TLI and RMSEA values were significant.

<div align="center">TABLE 3.6: Confirmatory Factor Analysis (CFA)</div>

	Chi Square	Df	CMIN DF	GFI	TLI	CFI	RMSEA
Initial Model	311.8	180	1.732	0.888	0.963	0.968	0.061
Modified Model	364.408	183	1.991	0.907	0.973	0.977	0.052

As the Table 3.6 is showing that the values are significant and model is good fit. The value of GFI is more than 0.9, values of TLI and CFI are more than 0.92 and the value of RMSEA is less than 0.6. It gave the evidence of model fit and scale validity. Figure 3.6 contains more explanation of CFA.
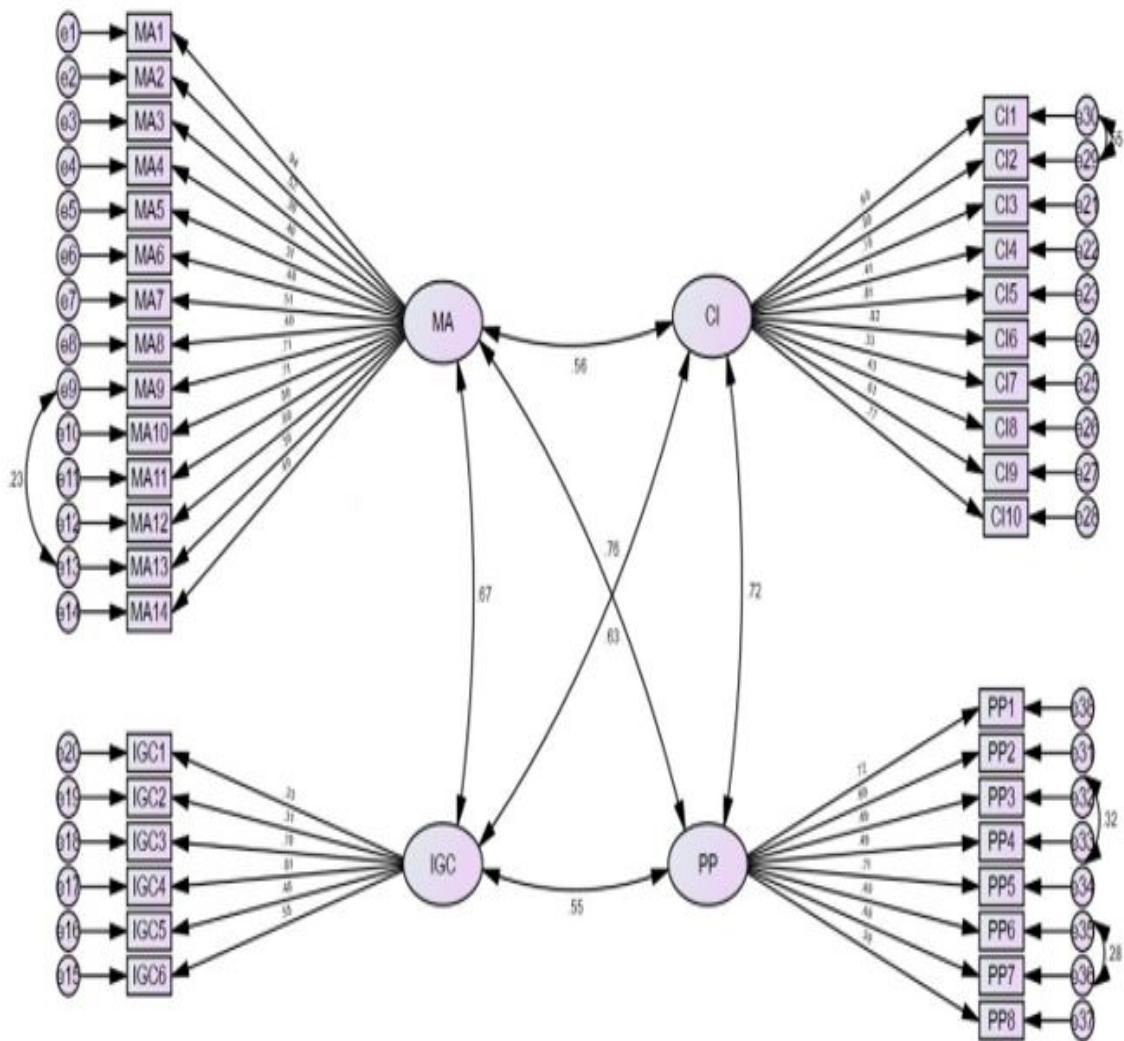
FIGURE 3.1: *CFA Model*

3.7 Pilot Testing

Before going to perform something on a larger scale it would be a very proactive and effective approach to conduct a pilot testing for it, as it will avoid many risks related to wastage of resources and time. Hence, Pilot testing of almost 30 questionnaires were carried out in order to validate, whether results are familiar and in line with the proposed hypothesis or not. After conducting the pilot testing

it was concluded that there was no significant problem in the variables and the scales were absolutely reliable for the pilot study conducted.

3.8   Reliability Analysis of Scales Used

Reliability is referred to a process of giving same consistent results over and over again when the specific item is being tested over number of time, same is for the scales. Reliability of scale depicts the ability of the scale to give consistent results when it is being tested for number of times. I have conducted reliability test through Cronbach alpha, it tells about the internal reliability of the variables and tells about if those variables have a link between them or nor along with that it also measures the single construct. Significant range for Cronbach alpha is 0 to 1 (Cronbach, 1951). Higher the value of cronbach alpha, the reliability of the scale to measure the construct it is meant to measure is also higher. Scale is considered reliable when the value of alpha above 0.7 and it is less reliable in measuring the selected set of construct when the value is below 0.7. In **Table 3.7**, the Cronbach alpha of the scales used in data collection are shown. The values of cronbach alpha for the variables under research are above 0.7. All the items having values 0.8 shows that these scales are highly reliable to be used in this study according the context of Pakistan.

TABLE 3.7: Scale Reliability and Validity Analysis

Variables	Cronbach's alpha ()	Items
Project Manager's Cultural Intelligence	0.773	10
Managerial Ambidexterity	0.871	14
Project Performance	0.839	8
Intercultural Group Climate	0.772	6

Table 3.7 shows the Reliability and Validity Analysis results after complete data collection. Cronbach Coefficient Alpha value of Project Manager's Cultural Intelligence was 0.773, Managerial Ambidexterity was 0.871, Project Performance was valued as 0.839, and Intercultural Group Climate was 0.772.

3.9 Data Analysis Techniques

After the collection of the data that is relevant to the study from 253 respondents, the data was then analyzed on SPSS software version 20. A number of procedures while analyzing the data are used, such procedures are as following:

1. First of all, only the questionnaires which were filled appropriately were selected for the analysis.

2. Each variable of the questionnaire were coded and each coded variable was used for data analysis.

3. Frequency tables were used in regard to explain the sample characteristics.

4. Descriptive statistics was conducted by using the numerical values.

5. Reliability of all the variables was checked through Cronbach co-efficient alpha.

6. Confirmatory Factor Analysis (CFA) was used to justify the measurement model.

7. Correlation analysis was conducted in order to know whether there is a significant relationship exist between the variables understudied in this research or not.

8. Single linear regression analysis of Independent and Dependent variable was conducted to determine the proposed relationship.

9. Preacher and Hayes Process were used for conducting mediation and moderation to determine the existence of the role of mediator and moderator between the Independent and dependent variables.

10. Through correlation and Preacher and Hayes method, the intended hypotheses were tested to check the rejection and acceptance of the proposed hypothesis.

Chapter 4

Results

4.1 Descriptive Statistics

Descriptive statistics comprehends the important points of information about data. It includes the total number of respondents, the minimum and maximum values of each variable, moreover the means and standard deviations of each variable. The mean values demonstrates the average of responses while the standard deviation values indicate the variation of responses from their means.

All the variables understudied were measured at 5 point Likert scale. Descriptive statistics is the information summary of whole data because it highlights the significant statistic points. The given table presents some significant figures that are representing the whole data.

The descriptive statistic comprises basic particulars like the size of the population, minimum and maximum values, mean values and standard deviation values of the data. Descriptive statistics of the current data is given in Table 4.1. First column of the table gives the details of the variables. Second, third, fourth, fifth and sixth columns inform about sample size, lower most value, upper most value, mean and standard deviation respectively.

TABLE 4.1: Descriptive Statistics

	N	Minimum	Maximum	Mean	Standard deviation
Project Manager's Cultural Intelligence	253	1.5	5	3.837	0.596
Managerial Ambidexterity	253	2.21	5	4.056	0.57
Project Performance	253	1.25	5	4.103	0.707
Intercultural Group Climate	253	2.17	5	4.04	0.553

Table 4.1 displays that sample size was 253 for all the four variables. All variables (Project Manager's Cultural Intelligence, Managerial Ambidexterity, Project Performance and Intercultural Group Climate) were rated on a five point Likert scale, such as 1 demonstrating "Strongly Disagree" and 5 demonstrating "Strongly Agree". Mean values and Standard Deviation values show the essence of responses. This is respondents' observation regarding a particular variable. The mean value of the Project Manager's Cultural Intelligence (PMCI) was 3.837 whereas value of standard deviation was 0.596. The mean value of Managerial Ambidexterity (MA) was 4.056 whereas value of standard deviation was 0.570. The mean value of Project Performance (PP) was 4.103 whereas value of standard deviation was 0.707. Finally, the mean value of Intercultural Group Climate (IGC) was 4.040 whereas value of standard deviation was 0.553.

4.2 Correlational Analysis

Generally correlation analysis is carried out to determine the association among the variables. In this research work, foremost objective to conduct correlation analysis is to find out the correlation between project manager's cultural intelligence and project performance, the mediating role of managerial ambidexterity and the

moderating role of intercultural group climate; to make the proposed hypotheses valid.

Correlation analysis is conducted in order to know about the nature of variation between the two variables that if the variables vary together at the same time or not. Basically correlation analysis doesn't entail relationship between two or more than two variables because it is different from the regression analysis.

In correlation analysis, Pearson correlation analysis tells about the strength and nature of the relationship through Pearson correlation range i.e. from -0.1 to 0.1. Hence, through magnitude value we can conclude the strength of the relationship between two variables and that magnitude value can generalize by the distance of correlation from zero. If the correlation is distant from zero that means the relation between the two variables is strong and vice versa. But if the values are zero that straightly means that there exist no relationship between the understudied variables. Positive and negative sign depicts the nature of the relationship, if the sign is positive that means increase in one variable causes increase in the other variable and that is considered as direct relationship and in the same way if the sign is negative that means that increase in one variable will cause decrease in another variable and that would be an indirect relationship.

TABLE 4.2: Correlation Analysis

Sr No.	Variables	1	2	3	4
1	PM's Cultural Intelligence	1			
2	Managerial Ambidexterity	0.509**	1		
3	Project Performance	0.394**	0.494**	1	
4	Intercultural Group Climate	0.464**	0.438**	0.357**	1

** Correlation is significant at the 0.01 level (2-tailed). N = 253, * $p < .05; **p < .01; ***p < .001 (CI = Cultural Intelligence, MA = Managerial Ambidexterity, PP = Project Performance, IGC = Intercultural Group Climate)$

Table 4.2 presents the correlations for all theoretical variables. Project Manager's Cultural Intelligence was positively correlated with Managerial Ambidexterity (r

$= 0.509, p < 0.01), with Project Performance (r = 0.394, p < 0.01) and with Inter-cultural Group Climate (r = 0.464, p < .01). Managerial Ambidexterity positively$

correlated with Project Performance (r = 0.494**, p ¡ 0.01), and with Intercultural Group Climate (r = 0.438**, $p < 0.01). Project Performance was positively$

correlated with Intercultural Group Climate (r = 0.357**,$p < 0.01$).

The above mentioned **table 4.2** show the correlation between the variables that are being studied under this study. And the values of correlation are depicting the nature and magnitude of relationship between the variables.

4.3   Regression Analysis

To analyze the existence of relationship between the variables, correlation analysis has been performed in the study, however mere reliance on the correlation analysis does not suffice because it just shows the existence of relationship between variables through an inadequate support and doesn't tell about the casual relationship amongst the variables. Therefore, regression analysis is executed so as to validate the dependence of one variable on another variable. Regression analysis basically depicts the extent to which one variable depends on another variable i.e. independent variable on which it is being regressed.

In this study, (Preacher and Hayes, 2004) methods have been used for both mediation and moderation regression analysis. Model 1 for moderation and Model 4 for mediation is used in (Preacher and Hayes, 2004) process, both for mediation and moderation are conducted separately.

H1: PM's Cultural Intelligence and Project Performance

Table 4.3 indicates the results of hypotheses testing. First, we tested H1 that project manager's cultural intelligence is positively associated with project performance. Results of regression analysis revealed that there is positive and significant

TABLE 4.3: Regression of Outcomes

Predictor	Managerial Ambidexterity			Project Performance		
	β	**R2**	Δ**R2**	β	**R2**	Δ**R2**
IV: Cultural Intelligence						
Step 1 Control Variables						
Step 2 Cultural Intelligence	0.483***	0.266	0.256***	0.469***	0.249	0.229***
Med: Managerial Ambidexterity						
Step 1 Control Variables						
Step 2 Managerial Ambidexterity				0.500***	0.285	0.301***

Un-standardized regression coefficient reported. N = 253, *
$p < .05; **p < .01; ***p < .001$

relationship existing between project manager's cultural intelligence and project performance. The β co-efficient value is 0.469, R2 = 0.249 with the p value = 0.000. The value of R2 shows coefficient of determination whereas β value shows the rate of change demonstrating that 1 unit change in cultural intelligence leads to 0.469 unit change in project performance. The p value of 0.000 indicates that relationship is highly significant. Hence, Hypothesis 1 is accepted.

H2: PM's Cultural Intelligence and Managerial Ambidexterity

In Hypothesis H2 we assumed that project manager's cultural intelligence is positively associated with managerial ambidexterity. The regression results of this hypothesis are given in Table 4.3.

Results of regression analysis revealed that there is positive and significant relationship existing between project manager's cultural intelligence and managerial

ambidexterity. The β co-efficient value is 0.483, R2 = 0.266 with the p value = 0.000. The value of R2 shows coefficient of determination whereas β value shows the rate of change demonstrating that 1 unit change in cultural intelligence leads to 0.483 unit change in managerial ambidexterity. The p value of 0.000 indicates that relationship is highly significant. Hence, Hypothesis 2 is accepted.

H3: Managerial Ambidexterity and Project Performance

In Hypothesis H3 we assumed that managerial ambidexterity is positively associated with project performance. The regression results of this hypothesis are given in Table 4.3.

Results of regression analysis revealed that there is positive and significant relationship existing between managerial ambidexterity and project performance. The β co-efficient value is 0.500, R2 = 0.285 with the p value = 0.000. The value of R2 shows coefficient of determination whereas β value shows the rate of change demonstrating that 1 unit change in managerial ambidexterity leads to 0.500 unit change in project performance. The p value of 0.000 indicates that relationship is highly significant. Hence, Hypothesis 3 is accepted.

4.4   Mediation Analysis Results

The Hypothesis 4 assumed that managerial ambidexterity plays a mediating role between project manager's cultural intelligence and project performance. To test the mediation of H4 we used model 4 of PROCESS macro through SPSS by (Bolin, 2014). In which we checked different paths a, b, c and c' respectively. According to Preacher and Hayes process there are total three effects that have to be ascertained: total effect, direct effect and indirect effect.
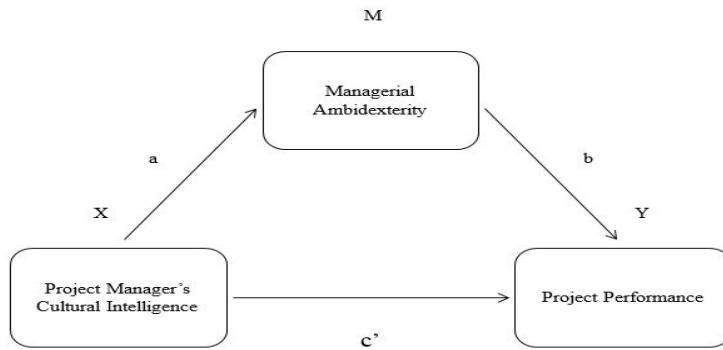
FIGURE 4.1: *Mediation Analysis*

TABLE 4.4: Mediation Analysis

DV	Effect on IV on M		Effect of M on DV		Total effect of IV on DV		Direct effect of IV on DV		Bootstrap results for indirect effects	
	(a path)		(b path)		(c path)		(c path)			Un-
	β	t	β	t	β	t	β	t	LLCI	ULCI
CI	0.483***	9.2	0.500***	6.4	0.469***	6.76	0.227**	3.05	0.1515	0.3557

standardized regression coefficient reported. Bootstrap sample size was 5000. Confidence Interval = 95N = 253, Control variables were, Gender, Age, Qualification and Experience, * $p < .05; **p < .01; ***p < .001 LLCI = Lower Limit Confidence Interval; ULCI = Upper Limit Confidence Interval.$
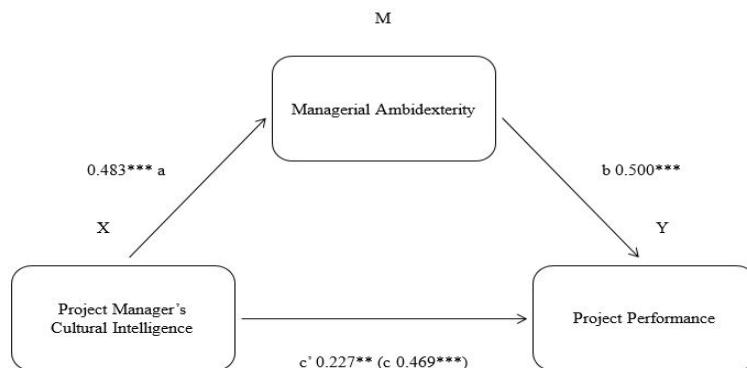
FIGURE 4.2: *Mediation Analysis with coefficients*

Following is the explanation of every path:

Total Effect

Total effect demonstrates the effect of IV cultural intelligence and DV project performance. The total effect of cultural intelligence on project performance is 0.469 with the significance of p = 0.000. It indicates that approximately 47% variance occur in project performance due to project manager's cultural intelligence. The lower limit of bootstrap is 0.33 while the upper limit is 0.60, without having any zero between both limits. Hence, H1 is accepted that project manager's cultural intelligence is positively associated with project performance.

Indirect Effect

Direct effect identifies the effect of IV cultural intelligence on DV project performance in the presence of mediator managerial ambidexterity. In the presence of mediator the direct effect is 0.227 with the significant p-value of 0.000. It demonstrates that project manager's cultural intelligence covers 22% variation of project performance in the presence of managerial ambidexterity. The lower limit of bootstrap is 0.08 while the upper limit is 0.37, without having any zero between both limits, which clarifies that the results are significant.

4.5 Moderation analysis

In order to test the hypothesis H5 which states that intercultural group climate moderates the relationship between cultural intelligence and managerial ambidexterity, we used model 1 of PROCESS macro through SPSS (Bolin, 2014). **Table 4.5** exhibits Moderation Analysis. **Hypothesis 5** states that "Intercultural Group Climate moderates the relationship between Project Manager's Cultural Intelligence and Managerial Ambidexterity. The result show regression coefficients of Interaction Term (PMCI x IGC) and Managerial Ambidexterity as (β = -0.090, p = 0.260, $\Delta R2$ = 0.003). The finding show that Intercultural Group Climate does not moderate between Project Manager's Cultural Intelligence and Managerial Ambidexterity and the relationship is insignificant because lower limit of bootstrap value is -0.249 and upper limit value is 0.067, having the zero value between

TABLE 4.5: Moderation Analysis

DV	Effect of CI on MA		Effect of IGC on MA		Effect of CI x IGC on MA		Bootstrap results for indirect effects	
	β	t	β	t	β	t	LL 95% CI	UL 95% CI
MA	0.595	1.96	0.733*	2.23	-0.09	-1.12	-0.249	0.067

Un-standardized regression coefficient reported. Bootstrap sample size was 5000. Confidence Interval = 95%. N = 253, Control variables were, Gender, Age, Qualification and Experience, $**p < .05; **p < .01; ***p < .001$

both limits. The result are shown in the table and also explain the conditional effect.
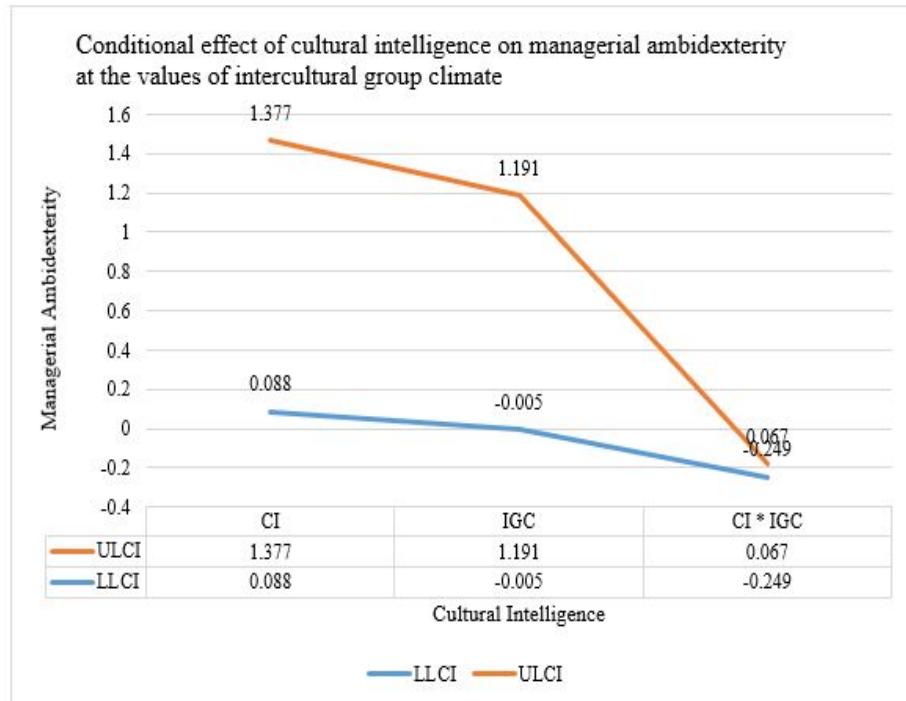
FIGURE 4.3: *Conditional effect of cultural intelligence on managerial ambidexterity at the values of intercultural group climate.*

Figure 5 represents the graphical explanation of rejection of Hypothesis 5. The intercultural cultural group climate does not moderate the relationship between cultural intelligence and managerial ambidexterity.

4.6   Summary of Accepted/ Rejected Hypothesis

Table 4.6 illustrates the precise summary of results for the proposed hypotheses under this study.

TABLE 4.6: Hypotheses Summarized Results

Hypotheses	Statement	Status
Hypothesis 1	There is positive association between Project Manager's Cultural Intelligence and Project Performance.	**Accepted**
Hypothesis 2	There is positive association between Project Manager's Cultural Intelligence and Managerial Ambidexterity.	**Accepted**
Hypothesis 3	There is positive association between Managerial Ambidexterity and Project Performance.	**Accepted**
Hypothesis 4	Managerial Ambidexterity plays a mediating role between Project Manager's Cultural Intelligence and Project Performance.	**Accepted**
Hypothesis 5	Intercultural Group Climate moderates the relationship between Project Manager's Cultural Intelligence and Managerial Ambidexterity.	**Rejected**

Chapter 5

Discussion

5.1 Discussion

The preceding researches in the domain of cultural intelligence and performance are comprehensive in nature encapsulating relevant aspects of the constructs (Cox, 1994; Campbell, 1999; Eisenberg et al., 2013a). Empirical researches on the literature of performance suggested that variables such as cultural intelligence, ambidexterity, workforce cultural diversity are important variables to study further and have significant influence on organizational performance (Heisig et al., 2016; Verbano and Crema, 2016) and project performance (Jordão and Novas, 2017).

The main emphasis of this research was to study the relationship between project manager's cultural intelligence and project performance in project based organizations within contextual settings of Pakistan. The research also studied the mediating role of managerial ambidexterity between cultural intelligence and project performance; and moderating role of intercultural group climate between cultural intelligence and managerial ambidexterity. The study was conducted in project-based firms having cultural diversity in the workforce.

The results of the study suggests that project manager's cultural intelligence has a positive impact on project performance which means that cultural intelligence of project manager enhances the performance of the project overall. There is a positive relationship between project manger's cultural intelligence and managerial

ambidexterity, which further have positive association with project performance. Therefore, H1, H2, H3 and H4 are accepted developing a relationship between project manager's cultural intelligence and project performance through mediator of managerial ambidexterity. This implies that cultural intelligence positively enhances ambidextrous ability of project manager which enhances the project performance.

The study inculcated variable of intercultural group climate as a moderator. The data analysis on the variable in the contextual settings of Pakistan proves that intercultural group climate negatively influences the relationship between cultural intelligence of the project manager and managerial ambidexterity. The role of intercultural group climate was found to be insignificant and negatively affecting relationship between cultural intelligence and managerial ambidexterity.

The comprehensive discussion on each of the hypothesis is as following:

The details discussion of each hypothesis is following.

5.1.1 Hypothesis H1:There is positive association between project manager's cultural intelligence and project performance.

In Hypothesis 1 it was proposed that there is a positive relationship between project manager's cultural intelligence and project performance. The results of the hypothesis ($\beta = 0.469$, t $= 6.76$, p $= 0.00$) proved the existence of significantly positive relationship between project manager's cultural intelligence and project performance. The t value of 6.76 indicates the significant level of relationship between project manager's cultural intelligence and project performance, as the value is greater than 2 means that results are statistically significant. The β co-efficient is 0.469 which demonstrates that if there is 1% unit change in cultural intelligence of project manager then there is a likelihood that project performance will increase by 46.9% units.

Empirical studies in the domain of project management mostly considers cultural intelligence as an important variable positively contributing towards project performance as individuals having high levels of CQ (Cultural Quotient) have high levels of proficiency and emotional sense (Bücker et al., 2015, 2014; Bücker and Korzilius, 2015). The results of this study are also in accordance with the results of the study by (Varela and Gatlin-Watts, 2014) which states that in modern era of globalization cultural intelligence is the key factor contributing positively towards project performance. Cultural intelligence allows individuals to adjust to culturally diverse environment by understanding cultural differences and appropriately catering these differences in accordance with contextual settings.

Culture plays a role of important instrument in projects in making them global and enhancing performance in terms of wide range of cultural expertise being brought by culturally diverse workforce with them (Zhao et al., 2013). The construct of culture when managed systematically by taking into account its formation, assembly, dissemination and application through organizational principles has significant implications in improving both organizational and project performance (Yitmen, 2013). Cultural intelligence increases the project performance by inculcating knowledge, skill and meta-cognitive element allowing individual to make the best use of all the three components simultaneously in acquiring, generating and applying knowledge intensive project planning and execution techniques and sharing the knowledge within project portfolio and project teams, therefore, enhancing project performance.

Cultural intelligence plays a vital role in enhancing project performance especially when it comes to collectivist societies like that of Pakistan. The collectivistic cultures are categorized by aspects like generosity, helpfulness, dependability and attentiveness to needs of others (Anbari, 2018). Cultural intelligence allows project manager to act according to the demands of situation particularly therefore allowing better adaptability and increased project performance. The relationship of cultural intelligence and project performance is positively and significantly established in project-based organizations of Pakistan as proved by the results of this study after empirical testing of the data.

5.1.2 Hypothesis H2: There is positive association between Project Manager's Cultural Intelligence and Managerial Ambidexterity.

In Hypothesis 2 it was proposed that there is positive association between project manager's cultural intelligence and managerial ambidexterity. The results of the hypothesis (β = 0.483, t = 9.20, p = 0.00) proved the existence of significantly positive relationship between project manager's cultural intelligence and managerial ambidexterity. The t value of 9.20 indicates the significant level of relationship between cultural intelligence and managerial ambidexterity, as the value is greater than 2 means that results are statistically significant. The β co-efficient is 0.483 which demonstrates that if there is 1% unit change in cultural intelligence then there is a likelihood that managerial ambidexterity would be increased by 48.3% units.

Existing literature available on cultural intelligence and ambidexterity also supports the results of the study (Wood and St. Peters, 2014; Lee et al., 2014; Fischer, 2011). (Erez et al., 2013) suggested in their research paper that cultural intelligence enhances ambidextrous capabilities of individuals allowing them to exploit state of the art ways available to carry out operations and explore new creative ways to improve existing operations in a better way. (Kim and Van Dyne, 2012) indicated in his study that intelligence breeds human capacity to be creative and maintain standardization as well and one of the facets of intelligence called cultural intelligence allows them to use these processes appropriately as the situation demands.

Ambidexterity as a concept inculcates both exploitative and exploratory methods to ensure enhanced performance on organizational as well as individual levels. Ambidexterity on individual level allows managers to exploit the existing competencies and explore new opportunities along with the creation of new knowledge (Taylor and Greve, 2006). The key element for reaching higher levels of individual level ambidexterity is to maintain an appropriate equilibrium between exploration

and exploitation. Cultural intelligence is one of the few important aspects contributing to allow individuals to maintain this balance. Whenever this appropriate balance is achieved between alignment and adaptability only then successful implementation of the projects can be ensured. Keeping in view effects of globalization managerial ambidexterity is considered among the essentials required in ensuring the successful implementation and completion of projects along with cultural intelligence in the domain of project management (Lavie and Rosenkopf, 2006).

The project based organizations of Pakistan entails ambidextrous element both on organizational and individual level and relationship of cultural intelligence and managerial ambidexterity is positively and significantly established as results of empirical testing of the hypothesis shows. The findings of the results supports positive relation of cultural intelligence with managerial ambidexterity in the contextual settings of Pakistan.

5.1.3 Hypothesis H3: There is a positive association between managerial ambidexterity and project performance.

In Hypothesis 3 it was proposed that there is positive association between managerial ambidexterity and project performance. The results of the hypothesis (β = 0.500, t = 6.40, p = 0.00) proved the existence of significantly positive relationship between managerial ambidexterity and project performance. The t value of 6.40 indicates the significant level of relationship between managerial ambidexterity and project performance, as the value is greater than 2 means that results are statistically significant. The β co-efficient is 0.500 which demonstrates that if there is 1% unit change in managerial ambidexterity then there is a likelihood that project performance would be increased by 50 % units.

The results of this hypothesis are supported by the findings of past researches that considers element of managerial ambidexterity as one of the critical factors for enhancing performance of projects (Parida and Örtqvist, 2015; Koskinen, 2012;

Choo et al., 2007). Ambidexterity allows project managers to implement exploitative and explorative practices simultaneously not only ensuring adaptability but also improvement and enhancement in performance both on individual as well as project level (Kodwani, 2012; Rosenzweig and Roth, 2004). Managers that are creative in thinking and adaptable to recent advancements are capable of motivating team members. The team members trust managers in return whom they find intelligently capable. Ambidextrous capability of the manager allows him to perform exceptionally as well as to enhance the performance of the project (Elenkov and Manev, 2009).

The fact that projects are time-bound make it a necessity to have mechanisms that ensure successful and timely adaptability and improvement techniques to be applied according to the demand of circumstances (Davies and Brady, 2016). Managerial ambidexterity allows manager to make an effective use of his exploitative and explorative abilities given the need of an hour making certain the successful implementation and timely completion of the project. The project management literature available on critical success factors for projects considers adaptability and innovation as one of the important features contributing in the project success (Di Stefano et al., 2014). It also take into account the fact that creativity is the element modern project based organizations thrive on. The paradigm shift towards globalization makes creativity and innovation an important competitive edge organizations can have over competitors (Nikolova et al., 2017).

Project based organizations when endeavor to develop new products or services require ambidexterity on individual and organizational level to ensure competencies required to complete projects within constraints and also to maintain quality standards (). The project based organizational setup in Pakistan entails creativity and innovation element along with the mechanisms of adaptability as the results of hypothesis suggests. The findings of the hypothesis establishes a positive and significant relationship between managerial ambidexterity and project performance on the basis of data collected from project based organizations in Pakistan.

5.1.4 Hypothesis H4: Managerial Ambidexterity plays a mediating role between Project Manager's Cultural Intelligence and Project Performance.

In Hypothesis 4 it was proposed that managerial ambidexterity plays a mediating role between project manager's cultural intelligence and project performance and this hypothesis has been accepted because results are demonstrating the significant relationship of managerial ambidexterity as a mediator between cultural intelligence and project performance, as the lower limit and upper limit 0.15 and 0.35 respectively indicated by the unstandardized regression coefficient are both positive and there is no zero existing in the bootstrapped 95% interval around the indirect effect of relationship of cultural intelligence and project performance through managerial ambidexterity.

There is no research existing previously to study mediating effect of managerial ambidexterity in the domain of project management. However, findings of the research conducted by (Alderman and Ivory, 2011) indicates that cultural intelligence significantly contributes in enhancing performance of the project. Inferences of the past literature also suggests that cultural intelligence plays a vital role in enhancing ambidexterity of an organization as culturally intelligent and diverse workforce is repertoire of talents and expertise of various forms and kinds enhancing innovative and creative organizational performance (Grabher and Thiel, 2015).

The modern paradigm shift towards globalization makes cultural intelligence a key human asset for both traditional and project based organizations (Sewchurran and Brown, 2011). Cultural intelligence breeds managerial ambidexterity allowing exploitative and exploratory mechanisms to be adopted both on individual and organizational level and hence enhancing organizational performance. Projects, throughout their lifecycles passes through series of unforeseeable complexities be it a social or economic events, supply chain problems or unexpected external events. Projects are subject to inherent fluctuations of organizations in which they are being carried out (Schwab and Miner, 2008). The uncertain nature of the projects

call for inclusion of workforce asset which is culturally intelligent. Such inclusions will lead to development of ambidextrous capabilities and hence the performance will also be enhanced both on project and organizational level.

The literature on organizational ambidexterity suggests that application, alone, of exploitative or exploratory strategy is not a key to success. The successful exploitative strategy in one organization can be a failure in its implementation phase in another organization, same goes for exploratory strategies. However one thing that quite clearly stands out is that irrespective of the context, time of implementation and changing the mode of strategies (exploitative and exploratory) according to situational demands are critical elements ensuring the success (Imai and Gelfand, 2010). The results of the hypothesis clearly suggests that relationship of cultural intelligence and project performance is mediated through managerial ambidexterity positively and significantly in the project based organizations of Pakistan.

5.1.5 Hypothesis H5: Intercultural Group Climate moderates positively the relationship between project manager's cultural intelligence and managerial ambidexterity; such that if intercultural group climate is high then the relationship between project manager cultural intelligence and managerial ambidexterity would be strengthened.

In Hypothesis 5, the moderating effect of intercultural group climate between cultural intelligence and managerial ambidexterity was studied. The results of Hypothesis 5 showed insignificant results. The analysis showed that there is insignificant effect of intercultural group climate (β = -0.09, t = -1.12, p = 0.26). The value of β= -0.09 predicts that intercultural group climate is not bringing any noticeable change in the relationship of cultural intelligence and managerial ambidexterity. The t-value of -1.12 demonstrates that the relationship is highly

insignificant because for a hypothesis to be significant t-value should be greater than 2. The lower and upper limit of -0.249 and 0.067 respectively indicated by un-standardized regression are having different signs and zero exists in the boot-strapped 95% interval, which means the results are insignificant. Hence, the results are not meeting the standards, statistically this relationship is insignificant and the hypothesis is rejected. According to the results of the hypothesis intercultural group climate does not moderate the relationship between cultural intelligence and managerial ambidexterity.

In this study we explored the moderating effect of intercultural group climate on the relationship of project manager's cultural intelligence and managerial ambidexterity. More specifically, the study was intended to prove that intercultural group climate enhances ambidextrous capabilities of culturally intelligent project manager. But the results of the hypothesis are insignificant and in our sample of study moderator of intercultural group climate does not significantly impact the relationship of cultural intelligence and managerial ambidexterity.

Previous studies have established the significant impact of intercultural group climate on the relationship of cultural intelligence and managerial ambidexterity (Peng et al., 2015). Moreover it enhances the ambidextrous capabilities of culturally intelligent project manager (MacNab et al., 2012). Although the literature is filled with such findings there are several reasons that support our results. First, not all aspects of differences among the group members' affects in the same way, different types of diversity have impacts in different ways on the individual behaviors of group members (Groves et al., 2015). Cultural diversity, in particular, may have more different impact on group behavior among all other diversity sources (Lane et al., 2009).

Further (Geraldi et al., 2008) correspondingly argues that investigations on the impacts of cultural differences cannot be generalized so there is gap in determining all the impacts of cultural differences and their consequences on group behavior. (Mannix and Neale, 2005) proposed three contradictory ways in which intercultural group climate influences teams and team performance. First is similarity attraction theory according to which people prefer to work and cooperate with

the people whose values and beliefs systems synchronized with their values and beliefs systems and attitudes. Second is social identity and social categorization theory according to which people affiliate themselves with specific groups and treat members of in-group with favoritism and judge members of the out-group on the basis of group characteristics. Third is information processing theory, according to which cultural diversity brings innovation and creativity in team performance along with other broader category of informational characteristics. The first two perspectives of similarity attraction and social categorization suggest that cultural diversity have negative impacts on the performance of team while information processing perspective suggest positive impact of diversity on group performance.

In conclusion, there is not only one way in which intercultural group climate impacts group performance, there are many other social factors impacting the performance along with individual characteristics. In the contextual settings of Pakistan it is important to put light on these distinctive actualities. The data suggests that team members of project teams mostly have similarity attraction for the members sharing same values and beliefs as theirs, therefore negatively affecting the group performance altogether which in return affects ambidextrous capabilities of culturally intelligent project manager negatively. In project based organizations of Pakistan, as the results of the hypothesis suggests that patterns of similarity attraction and social categorization prevails when it comes to intercultural group climate more than information processing pattern.

5.2 Practical and Theoretical Implication

This study did very significant contributions in the past literature in both ways, theoretically and practically. The study has contributed to the literature of variables like cultural intelligence, managerial ambidexterity, intercultural group climate and project performance. There is very limited literature available on individual level ambidexterity specifically emphasizing its role in the domain of project management (Ott and Michailova, 2018). This is very important contribution to

literature since previously there is no research available highlighting the mediating role of managerial ambidexterity in the relationship of cultural intelligence and project performance within the contextual settings of Pakistan in the domain of project management.

The study illustrates very significant actualities by identifying the impact of project manager's cultural intelligence on project performance in the context of Pakistan, where culture is considered an important yet sensitive instrument in streamlining efforts to enhance project performance. In the collectivist societies like that of Pakistan culture is an important element of individual life and organizational setup. It influences strongly one's believes, values and everyday interactions. In such societies cultural intelligence is an important element ensuring success as it allows individuals to adapt of reshape cultural situations using one's own conscious (Mao and Shen, 2015). It is identified through the study that cultural intelligence significantly enhances project performance as it allows project manager to adapt to cultural settings and to deal with culturally diverse project team in a way to motivate them to work effectively and as a result enhanced project performance is achieved.

Another very important theoretical contribution is the role of managerial ambidexterity as a mediator between cultural intelligence and project performance which is not acknowledged in the literature before. Previous literature available on cultural intelligence and project performance have identified other mediators in the relationship but managerial ambidexterity has never been introduced not in the relationship nor as a mediator before. The results of the study demonstrated that cultural intelligence increases ambidextrous capabilities of project manager that leads to enhanced project performance. As cultural intelligence and managerial ambidexterity are important and distinctive variables in the domain of project management, so analyzing these variables in the contextual stings of Pakistan, comes out as a unique research which has contributed significantly in the literature.

Moreover, this research also studied the moderating role of intercultural group

climate on the relationship of cultural intelligence and managerial ambidexterity. The results of the study suggested that intercultural group climate does not positively moderate the relationship between cultural intelligence and managerial ambidexterity in the contextual settings of Pakistan. This too is a significant theoretical contribution especially in the literature of effects of cultural diversity in collectivist societies. Organizations along with project managers should inculcate proper mechanisms to reduce negative effects of intercultural group climate as it significantly impacts the potential future and long term viability of the organization in context of performance and success.

This study is equally important in the practical business world. In this age of modernization where world is moving rapidly towards globalization, cultural intelligence along with ambidexterity is considered one of significant aspects in defining potential future and long term viability of project based organizations in the context of performance and success. This research is helpful for project based organizations in a way that it provide insights on how cultural intelligence enhances project performance through managerial ambidexterity, for a system to be adopted in a way that it ensures success on both individual and project level.

5.3   Limitations of Research

There are always few limitations in research as it is not possible to cover all aspects in one study. This study has filled few research gaps by adding knowledgeable facts in literature. On the other hand there are some limitations associated with this study because of time and resource constraints. The study is directed only to the project based organizations of Pakistan and the results may not be generalized to other sectors. The target population of the study mainly was embassies so the contact with project managers and teams was real challenge because of the security concerns.

Moreover, it was practically not possible all the components of intercultural group climate, it was determined after analysis that results are not the same as what was

expected with respect to past studies and literature, mainly due to other components of intercultural group climate significantly playing role in collectivist society of Pakistan. Additionally we use convenience sampling method and choose the sample which was easily accessible to us. It can narrow the generalizability of results. The results are different because of strong contextual and situational factors as well as Pakistani cultural has strong impact and results cannot be generalized to other countries.

5.4 Future Research Directions

This research open numerous novel avenues for future researches. In this study we empirically tested the impact of project manager's cultural intelligence on project performance but in the future researchers can examine the impact of cultural intelligence on other project related variables i.e. project planning methodologies (ppm). The current study has been done with the focus on project based organizations only, this actually gives a way forward to the researchers examine and replicate the model in organizations (both public and private) other than project based organizations in order to examine the impact with a large sample size.

Moreover, the relationship between cultural intelligence and project performance can be studied with other mediating variables. Future researches can also focus on moderating role of other variables between the relationship project manager's cultural intelligence and managerial ambidexterity. Alongside there is also enough room available to explore multiple conditional factors that can affect these relationships. Managerial ambidexterity is the novel variable in the domain of project management can be studied and empirically tested in other relationships both on individual and organizational level.

We recommend further research to pay attention on the data and data collection techniques because this study has some drawbacks. The results and significance of the study will be useful for the future researchers focusing on this area to link cultural intelligence to various other variables like managerial ambidexterity. Also the sample size can be broaden as this study is just limited to easily accessible

sample. In doing this the rejected hypothesis can be re-analyzed by using specified domain. Hence, upcoming researches possibly can incorporate these guidelines.

5.5 Conclusion

This study is conducted to develop the domain of cultural intelligence and project performance, which are very popular fields and having great significance in the present era. This study has made an attempt to consider the relationship between project manager's cultural intelligence and project performance in project based organizations of Pakistan. Data was collected from project based organizations (embassies, USAID, UNDP) of Pakistan through a questionnaire survey to measure the extent to which cultural intelligence impacts project performance with mediating role of managerial ambidexterity and moderating role of intercultural group climate.

Altogether 350 questionnaires were disseminated however, only 253 were used for analysis since these questionnaires were having the most appropriate and complete information required for carrying out the analysis of this study. Statistical tests indicate that validity and reliability of the model variables and fit of the model are also suitable. The proposed hypotheses are also supported through triarchic theory of human intelligence. The data analysis results in the acceptance of all hypotheses except the hypothesis of moderation .i.e. intercultural group climate positively moderates the relationship between cultural intelligence and managerial ambidexterity, which is not accepted possibly due to the fact that only one dimension was considered and also due to cultural context of Pakistan.

This study contributes to the existing literature of cultural intelligence and managerial ambidexterity because there is very limited literature available about the variables in the domain of project management. Moreover this study contributes to the literature in a way that it identifies a different mediator of managerial ambidexterity between project manager's cultural intelligence and project performance. This study has given a holistic view of impact of cultural intelligence on

project performance along with managerial ambidexterity as a mediator in project based organizations of Pakistan.

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Appendix-A

<div align="center">

Questionnaire

</div>

Dear respondent,

My name is Ayesha Afzal. As a MS research student at Capital University of Sciences And Technology, Islamabad, I am collecting data for my research paper titled as "Impact of Cultural Intelligence on Project Performance, with Mediating Role of Managerial Ambidexterity Moderating Role of Intercultural Group Climate, in the contextual setting of Pakistan". It will take your 10-15 minutes to answer the questions and to providing the valuable information. I assure you that data will be kept confidential and will only be used for academic purposes.

Sincerely,

Ayesha Afzal

MS (PM) Research Student

Capital University of Sciences and Technology, Islamabad.

Please provide following information.

Section: 1	Demographics
Gender:	1- Male 2- Female
Age:	1 (18-25), 2 (26-33), 3 (34-41), 4 (42-49) 5 (50 and above)
Qualification:	1 (Matric), 2 (Inter), 3 (Bachelor), 4 (Master), 5 (MS/M.Phil), 6 (PhD), 7 (Post PhD)
Experience:	1(0-5), 2(6-11), 3(12-17), 4(18-23), 5(24-29), 6(30 and above)

Section II: Project Manager's Cultural Intelligence; 1 = Not at all, 2 = a little, 3 = Somewhat, 4 = A lot, 5 = Extremely Well

1	I know the ways in which cultures around the world are different. (K)	1	2	3	4	5
2	I can give examples of cultural differences from my personal experience, reading, and so on. (K)	1	2	3	4	5
3	I enjoy talking with people from different cultures. (S)	1	2	3	4	5
4	I have the ability to accurately understand the feelings of people from other cultures. (S)	1	2	3	4	5
5	I sometimes try to understand people from another culture by imagining how something looks from their perspective. (S)	1	2	3	4	5
6	I can change my behavior to suit different cultural situations and people. (S)	1	2	3	4	5
7	I accept delays without becoming upset when in different cultural situations and with culturally different people. (S)	1	2	3	4	5
8	I am aware of the cultural knowledge I use when interacting with someone from another culture. (M)	1	2	3	4	5
9	I think a lot about the influence that culture has on my behavior and that of others who are culturally different. (M)	1	2	3	4	5
10	I am aware that I need to plan my course of action when in different cultural situations and with culturally different people. (M)	1	2	3	4	5

K=Knowledge Item.

S= Skill Item.

M=Metacognition Item.

Section III: Managerial Ambidexterity; 1= to very small extent, 2= to small extent, 3= Neither/Neutral, 4= to large extent, 5= to very large extent

To what extent did you, last year, engage in work related activities that can be characterized as follows?

1	Searching for new possibilities with respect to products/services, processes, or markets	1	2	3	4	5
2	Evaluating diverse options with respect to products/services, processes, or markets	1	2	3	4	5
3	Focusing on strong renewal of products/services or processes	1	2	3	4	5
4	Activities of which the associated yields or costs are currently unclear	1	2	3	4	5
5	Activities requiring quite some adaptability of you	1	2	3	4	5
6	Activities requiring you to learn new skills or knowledge	1	2	3	4	5
7	Activities that are not (yet) clearly existing company policy	1	2	3	4	5
8	Activities of which a lot of experience has been accumulated by yourself	1	2	3	4	5
9	Activities which you carry out as if it were routine	1	2	3	4	5
10	Activities which serve existing (internal) customers with existing services/products	1	2	3	4	5
11	Activities of which it is clear to you how to conduct them	1	2	3	4	5
12	Activities primarily focused on achieving short-term goals	1	2	3	4	5
13	Activities which you can properly conduct by using your present knowledge	1	2	3	4	5
14	Activities which clearly fit into existing company policy	1	2	3	4	5

Section IV: Project Performance; 1= Strongly Disagree, 2= Disagree, 3= Neither Agree/nor Disagree, 4= Agree, 5= Strongly Agree

1	Projects are completed on time.	1	2	3	4	5
2	Projects met budget requirements.	1	2	3	4	5
3	Projects met expectations.	1	2	3	4	5
4	Project team members are satisfied to work together.	1	2	3	4	5
5	Benefits of projects to the organization are high.	1	2	3	4	5
6	Projects resulted in sales growth.	1	2	3	4	5
7	Projects helped the organization to increase market share.	1	2	3	4	5
8	Projects helped the organization improve its competitive position.	1	2	3	4	5

Section V: Intercultural Group Climate; 1= Strongly Disagree, 2= Disagree, 3= Neither Agree/nor Disagree, 4= Agree, 5= Strongly Agree

1	In project we think positively about cultural differences of colleagues.	1	2	3	4	5
2	In project we understand and accept different cultures.	1	2	3	4	5
3	In project we recommend working with people with cultural different backgrounds.	1	2	3	4	5
4	Differences in cultural backgrounds are discussed openly in our project.	1	2	3	4	5
5	In project we take differences in traditions and habits (like religion, celebrations) into account.	1	2	3	4	5
6	In project we see the advantage of differences in cultural backgrounds of employees.	1	2	3	4	5