



**Delivering Innovation in Projects:  
An Investigation on the Impact of Heterogeneous Cultural  
Intelligence in UAE**

**تحقيق الابتكار في المشاريع:  
التحقيق حول تأثير الذكاء الثقافي الغير متجانس  
في دولة الإمارات العربية المتحدة**

**by**

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of the requirements for the degree of  
MSc PROJECT MANAGEMENT**

**at**

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## **Abstract**

Culture plays a significantly important role in project management. In the past researches, the performance of organizations was explored but there is little emphasis on delivering innovation and impact of heterogeneous cultural intelligence. The aim of this research is to explore the perception of project management heterogeneity, innovation, and cultural intelligence, the connection between project heterogeneity and the process of project managers' decisions making considering the related opportunities and challenges, and develop a framework for delivering innovation in projects investigating the influence of heterogeneous cultural intelligence and decision-making models within UAE.

Additionally, the main research questions are: How can heterogeneous cultural intelligence influence delivering innovation in projects? What are the different factors and/or elements that impact heterogeneity and innovation? And what are the measurements associated with heterogeneity and innovation outcomes?

The methodology used in this study is quantitative research method in terms of data collection and data analysis such as online survey questionnaire and statistical analysis. The findings showed that there are similarities between literature findings and current data findings from survey questions. Therefore, the findings showed positive relationship of teamwork within heterogeneous teams in projects. Another interesting findings made was challenges faced such as conflicts, stresses, weak cohesiveness, poor mechanisms, disagreements and difficulties in working together. In addition, cultural diversity showing effects on innovation and leadership effectiveness but high CQ levels in minimizing such effects. Furthermore, individuals face some challenges in their capabilities to deal with heterogeneous project team but they are doing well.

**Keywords:** Project Innovation, Heterogeneous Cultural Intelligence, Diversity, Project Management.

## ملخص

تلعب الثقافة دورا هاما في إدارة المشاريع. في البحوث السابقة، تم التحقيق والبحث في أداء الشركات ولكن تبين أن هناك القليل من التركيز على تقديم الابتكار وأثر الذكاء الثقافي الغير متجانس في إدارة المشاريع. ولذلك، الغرض من هذه الدراسة هو البحث في مصطلحات عدم التجانس في مجال إدارة المشاريع والابتكار والذكاء الثقافي، والصلة بين عدم التجانس في المشاريع، والخطوات التي يتبناها مديري المشاريع مع مراعاة في اتخاذ القرارات، واستكشاف الفرص والتحديات ذات الصلة، ووضع إطار لتقديم الابتكار في واستكشاف المشاريع حول تأثير الذكاء الثقافي الغير متجانس ونماذج صنع القرار داخل دولة الإمارات العربية المتحدة.

وبالتالي، فإن الأسئلة البحثية الرئيسية هي: كيف يمكن للذكاء الثقافي الغير متجانس التأثير على تقديم الابتكار في المشاريع؟ ما هي العوامل و / أو العناصر المختلفة التي تؤثر على عدم التجانس والابتكار؟ وما هي القياسات المرتبطة بعدم التجانس ونتائج الابتكار؟

المنهجية المستخدمة في هذه الدراسة هي طريقة البحث الكمي من حيث جمع وتحليل البيانات مثل استبيان المسح على الانترنت والتحليل الإحصائي. وأظهرت النتائج أن هناك أوجه تشابه بين نتائج الأدب والنتائج الحالية للبيانات من أسئلة المسح. لذلك، أظهرت النتائج علاقة إيجابية من العمل الجماعي ضمن فرق غير متجانسة في المشاريع. وكانت النتائج الأخرى المثيرة للاهتمام هي التحديات التي تواجه فرق العمل مثل الصراعات، والضغط، وضعف التماسك، وضعف الآليات، والخلافات والصعوبات في العمل معا. وبالإضافة إلى ذلك، فإن التنوع الثقافي يظهر أثارا على الابتكار وفعالية القيادة ولكن مستويات الذكاء الثقافية العالية تساعد في التقليل من هذه الآثار. وعلاوة على ذلك، يواجه الأفراد بعض التحديات في قدراتهم على التعامل مع فرق المشاريع الغير متجانسة لكنهم على ما يرام.

**كلمات البحث:** ابتكار المشروع، الذكاء الثقافي الغير متجانس، التنوع، إدارة المشاريع



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# CHAPTER 1: Introduction

## 1.1 Project

Every project is unique, in any organization for example, irrespective of the type of job, location, and position of employees. Each one performs different tasks to achieve one ultimate goal mutually together. Regardless of the simplicity or complexity of a task and/or project, Amabile and Khairi (2008) said that the more diversity in the resources and skills, and more innovative results would be realized. Nonetheless, the substantial thing is that every person manages projects throughout their life series.

Many researchers and authors defines project management in various ways. However Tuman (1983) came up with a very comprehensive definition, he stated that in any people organization, a project is set up with the intention toward a particular objective or purpose where projects in general consist of huge cost and high risk obligations that need to be realized in a specific timeframe, with certain projected cost, and estimated performance level. Leastwise, all projects must have properly defined objectives and contains enough resources in order proceed with all the necessary tasks and responsibilities. On the other hand, Kerzner (2003) has distinct the term of project management as the planning, organizing, directing, and controlling of business resources towards a reasonably short term objective which has been instituted towards achieving particular objectives and goals.

In addition, in reference to PMBOK (2000), a project is a temporary attempt conducted to create a unique product or service. Henceforward, temporary means that every single project has a certain start and end dates. Where unique means that the product or service is dissimilar in several characteristic ways from all other projects and/or services. Gittinger (1972) has defined projects as an entire set of activities engaged with using resources that has a view to obtain benefits. Therefore, all the theoretical and practical description of project leads to similar meaning which regulates a project as an exceptional process that holds a number of measured activities and/or tasks with agreed start date and end date by means of having a definitive target to reach.

## 1.2 Project Management

Lots of authors has pursued to describe the terms and conditions of project management, however it is quite challenging to provide an explanation which is concise, comprehensive and understandable (Woodward, 1997). In line with PMI (1994), project management consist of using knowledge, tools, skills, and techniques towards planning activities in order to encounter the stakeholder's requirements and exceeding their expectations. PMI described project management as the art of guiding and organizing humans and resources through the life of the project to grasp its objectives taking into consideration the surrounded constraints and obstacles.

According to Duncan (2008), project management is achieved successfully depending on the processes of application and integration which directly rely on the followings: initiating, planning, executing, monitoring, controlling and closing. Lock (2003) clarifies that a large industrialized projects contains various distinguished activities which should give focus on one ultimate target; from the initiation of the work to the end and delivery of the plant. Hence, the organizational structure need to run efficiently on the basis of collaboration and communication to realize all the carried out obligations which are headed for end-users. Having said that, it is crucial for an organization to own the great capabilities and experiences in planning and optimizing the different activities in a project, in addition to using highly advanced management tools and methodologies to control cost and time constraints then to overcome the challenging aspects of growing efficiency. Munns and Bjeirmi (1996) indicated that project management can be well-defined as the controlling of the achievement process towards attaining the objectives of a project.

Consequently, in order to be able to distinguish between what is project and what is project management, it is crucial to come up with distinctive explanations for both terms. Thus, a project could be deliberated as the accomplishment of particular objectives that consist of series of activities, milestones, and tasks which relies on consuming resources. As a result, the project has to be concluded within a set of conditions, having an agreed start and end dates. Whereas, project management on the other hand, can be identified as the process of controlling and monitoring the

project objectives achievement. Hereafter Kerzner (2013) claimed that by utilizing the existing organizational structures and resources, it pursues towards managing the project through using the right tools and techniques, without impacting the consistency of the organization's operational work. The project management function comprises outlining the work requirement, forming the work size, allocation of the required resources, planning the work execution, monitoring the work progress, and finally adjusting any variation from the original plan.

According to Warner, P. D. (2012), innovation in project management is significantly important. Therefore, this paper will establish a bridge between innovation and project management. Fagerberg and Verspagen (2009) saw a strong connection between management and innovation and hence they stated that to some extent management can be a field of cross disciplinary which by default establish a firm-level innovation which may naturally falls in its portfolio. Hereafter, the studies of management and innovation have some ongoing obvious common ground.

### **1.3 Decision in Project Management**

In this day and age, many projects requires decision making which is hard to undertake without the challenges framework. Kerzner (2013) claimed that a lot of countries preserve a culture where limited people have got the authority to decision making. Nevertheless, Project Management supports the authority of decentralization, and making decision (Caldwell, 2005). On the word of IPMA (2011), project managers frequently face the classic exchanges of time versus cost and quality. Regularly, if they are decision-makers, they live under the pressure to make various inevitable decisions in order to avoid prospective risks or they prepare themselves to mitigate. Time, cost, quality, and scope of any project have significantly major constraints. Any negative distinction in these set of values disturb the project's end result and overall reputation for both the project itself and the decision makers.

In recent times, many researches has been carried out by scientists researchers and academics like Blanchette & Richards (2010), and Schwarz (2000), who pursued to address the awareness issue and its influence on making decisions and judgments. For that reason, understanding the factors

influencing the stakeholders' perceptions besides the clients is predominantly crucial for project management, perceiving that awareness inspire decision-making and so investment strategies. Therefore, there are two focal reasons. First, as a result of the projects growing complexity, it is rational to suggest that the use of project management criteria inherent in time, cost and quality of measures may be very consistent to evaluate project results effectively. Secondly, Ojiako et al. (2012) highlighted that biased constraints like social cognition and culture do have an influence on the project outcomes observations differences which are managed by project managers.

According to Unkin (1985), many studies devoted to the identify the simplification of knowledge have shown that, while going through conscious or unconscious perceptions, individuals usually are merely capable to make decisions by decreasing complex information to basic mental models. The implications of decision-making, governance, and judgments are within the project management field which leads the project stakeholders to make decisions depending on the limited parameters assessment/evaluation that affect the project outcomes.

Having said that and through decision making models, there is not any fundamental plan for risks averse. It is performed with a reality check through the steps that should be taken in response to a certain situation. This situation possibly will account for positive or negative risks, hence, these risks can reduce a risk response plan accordingly.

Therefore, later in this paper, a proper demonstration of decisions in project management will be presented. A deep dive on the importance of the project manager role as a decision maker will be discussed. Besides, some highlights of successful delivery of innovation in managing projects will be undertaken focusing intensively on heterogeneity and decision judgments.

## **1.4 Project Success and Failure**

The project definition of success and failure proposes that there is a direction which is headed for greater and long-term goals. Thus, imperative strictures in the project goals will be return on

investment (ROI), profits, competition and market ability (Bjeirmi and Munns, 1996). As stated by McCoy (1986), success does not have any universally common definition and there is no standard practice and/or methodology to measure it. Liu and Walker (1998) claimed that the success of a project is a subjective matter that is often debated but hardly agreed upon. They stated that the project success concept has continued to be vaguely defined where the notion is significantly crucial for diverse people but the variation in perceptions has led to controversies regarding whether a project can be defined as successful or not.

According to Kerzner (2013), project success is initially defined as the activity completion within the constraints of cost, time, and performance. However, this definition has been developed by PMBOK Guide (5<sup>th</sup> edition) to include the completion of The allocation period of time, The budget and cost, The appropriate performance or the standard of the specification level, Acceptance by customers and users, Minimum and/or jointly agreement upon changes of scope, Without disturbing the organization's main process and/or work flow, and Without changing the culture of the cooperate.

On the other hand, project failure is well-defined by Storm and Savelsbergh (2005) as failure to complete a project in a state where: the budget and schedule are extremely due and overrun, the project doesn't meet the formerly agreed requirements, and the project value has significantly reduced during the execution period.

For that reason, considering project management as a subset of the project description as a whole, it is recommended that the comprehensive decisions upon choosing a suitable project are more possible to influence and inspire the overall project success than can be achieved by concentrating on the project management techniques. These techniques may perhaps support ensuring a successful implementation of the project, as well as, it might have an advantage identifying the project impracticable nature, and point out if it must be ignored or changed. Nevertheless, if the project is basically weak from the beginning, it would be implausible that those techniques alone could save and/or rescue the project (Bjeirmi and Munns, 1996).

Having to discuss the project success and failure in this paper is significantly important. First, it will debate what makes any project a success and failure in order to get a good understanding points about it. Then, will feature the academics' opinions and thoughts in terms of evaluating projects success and failure. Finally, it will measure how diversity can impact and/or influence delivering successful innovation projects.

### **1.4.1 The Project Manager Role as a Decision-Maker**

Nowadays, every organization's success rest on its leadership capabilities and strengths. As for project managers, the greater their set of skills are, the more valuable they are to their employers and work. Thus, having an effective decision making skill is major as it is significantly important to enable making and/or taking business decisions. Also, having the rationality to measure and evaluate the presented options and then select the best sequence of action. However, poor decision-making and tentativeness could stand on the way of the project manager's career (Villanova University, 2017). Therefore, the success or failure of any project depends on how adept the project managers are and how much training the employer consider to train and up skill their employees to the right level in order to raise the awareness and competences towards success.

Moreover, the project managers are responsible of allocating the right resources to the right tasks. Holzell (2010) summarized the role of project manager in the development of key decisions on project schedules. This is done through the project manager's role in establishing critical paths and Gantt charts progress. Intrinsicly the project manager own the responsibility of allocating resources across the different project tasks and milestones. Hence, features like perceptions, risk consciousness and avoidance of heterogeneity traits affect the decision-making processes amongst project managers.

## **1.5 The Notion of Heterogeneity**

According to the website [vocabulary.com](http://vocabulary.com), heterogeneity is defined as a word that signifies diversity. For instance, a classroom that is consisting of students from heaps of different

backgrounds would be considered as having the heterogeneity quality. While the prefix hetero- means "different or other," whereas the prefix homo- means "the same." In reference to many academics and researchers such as Horwitz (2007), team diversity has become the subject of various reviews and meta-analyses. Hence, diversity or heterogeneous discusses the distributional differences between team members considering the respect to the mutual traits (Bell, 2011).

Scholars have proposed few competing hypotheses regarding how diversity forms can impact team performance. The existence of diversity in teams reduces the perceptions of similarity, in this manner, it decreases the opinions of interpersonal attraction and the cohesion within a team (Jackson, May, & Whitney, 1995; horwitz, 2005). Moreover, dissimilarity in the team members' qualities also increase the possibility of emotional conflict within teams, whereby decreasing team overall effectiveness (Jehn, Northcraft, & Neale, 1999; Jackson & Joshi, 2004).

In addition, Horwitz (2005), claimed that alternative perspective can be identified as the cognitive resources of diversity theory. This recommended that heterogeneity within team member features provides those extra and altered perceptions that could be implemented to team issues (Jackson & Joshi, 2004). Consequently, Horwitz (2005) stated that teams that are comprising of heterogeneous members that indorse innovation, creativity, and problem solving, henceforth making more conversant and insightful decisions. The endorsement of these hypotheses or the delimitation of the conditions could have substantial implications for building and structuring variety of decisions within a team (Hodgkinson & Ford, 2012)

## **1.6 National Culture and Cultural Intelligence**

According to Jais (2007), the culture term has different meanings which came from the Latin meaning of "cultivation of soil." Hereafter, Jais continuous demonstrating that in the anthropological sense, culture consists of all human life factors. He added that it doesn't only relate to "civilized" societies, however, all human groups have a culture, even if they are "primitive". Tylor (1871), came up with the first educational definition for culture. He defined it as a mixture that comprises of belief, knowledge, law, art, morals, customs, and other various

habits and capabilities which has been developed and learnt among society members. Nonetheless, a century later, the Redfield anthropologist has defined culture as “shared understandings made manifest in act and artifact.” Whereas Hofstede (1991) defined culture as “the collective programming of the mind distinguishing the members of one group or category of people from others.”

In regards to the national culture, most definitions stress on shared values. Some anthropologists are addressing the values definition and questioning what should be. Conversely, others emphasize their concerns referring to collective modal practices as an alternative to the values importance. Similarly, some relevant approaches aim towards the conceptualization of national culture in the social sciences. (Jais, 2007). Additionally, the National Culture is defined as the mixture of beliefs, symbols, and artefacts usual for one nation members. Also defined as the assumptions and shared values apprehended by people living within the same nation (Bondarouk, 2009).

Furthermore, since the early of 2000's, the cultural intelligence perception became widely used in international business and organizational research and practice. According to many researchers like Budworth and DeGama (2012), cultural intelligence is significantly essential due to the growing connections between people in diverse cultural backgrounds in nowadays' globalized world. Hence, Earley and Ang (2003) were among the first scholars to suggest and/or propose the cultural intelligence term. They established the term by depending on the theory of Nature intelligence which is proposed by Sternberg and Detterman (1986). Henceforward, they well-defined cultural intelligence as “a person's competency towards adopting effectively to new contexts of culture”. What is more, Livermore's (2011) claimed that cultural intelligence is the ability to effectively function through a variation of cultural contexts, for instance generational, ethnic, and organizational cultures. Furthermore, Thomas's (2006) explanation of cultural intelligence emphasizes on the reflection on the capabilities to efficiently dealing with people coming from different cultural backgrounds.

## **1.7 The Research Map**

### **1.7.1 Current Research Situation**

Nowadays, the vision of the United Arab Emirates is to place itself amongst the top 10 most innovative countries globally by 2021. The UAE's huge concentration on innovation and dedicated generous funds proves its commitment to develop its economy as well as grow its competitiveness internationally (The Innovation Index, 2016).

However, delivering Innovation in Projects is significantly challenging in UAE due to heterogeneity cultural intelligence impact on project management and decision making process that forms various constraints which impede achieving it successfully. These constraints can be shaped and outlined in various ways, however, the focus of this research paper is to shed the light and present this interpretation through the impact of heterogeneous cultural intelligence on the innovative employees' capabilities and proficiencies working as a project team. Taking into consideration that disregarding the impact of the team members' heterogeneity working on a project would lead to poor decision making, performance, and innovation.

### **1.7.2 Research Purposes**

- Explore the heterogeneity perception of project management, Innovation, and cultural intelligence.
- Explore the connection concerning project heterogeneity and the process of project managers' decisions making considering the related opportunities and challenges.
- Develop a framework for delivering innovation in projects investigating the impact of heterogeneous cultural intelligence and decision making models within UAE.

### **1.7.3 Research Problem**

Limited researches that focus on delivering innovation in projects which explore deeply on the impact of heterogeneous cultural intelligence in the United Arab Emirates.

### **1.7.4 Research Objectives**

- Study the cultural heterogeneity phenomenon in UAE business environment
- Research the direct and indirect factors which impact delivering innovation in projects by investigating the heterogeneity of cultural intelligence.
- Study the impact of cultural intelligence on projects' success and failure.
- Explore the main challenges in the context of cultural heterogeneity for team members and project managers.
- Examine the type of leadership needed towards ensuring efficiency and a high standard performance of heterogeneous project team.

### **1.7.5 Research Questions**

- a) How can heterogeneous cultural intelligence influence delivering innovation in projects?
- b) What are the different factors and elements that impact a heterogeneous project team?
- c) What is the connection between heterogeneity of a project team and the evaluation of the project success and/or failure?
- d) What opportunities can be underlined and are associated with heterogeneous projects?

## 1.8 Chapters Outline

Chapter 1 gives a generic overview about projects, project management, and decisions in project management. It also discuss the project success and failure and the project manager role as a decision-maker. Consequently, it provides an overview about the notion of heterogeneity and national culture and cultural intelligence. Besides, it demonstrates the current research situation, aims and objectives, and main questions of this dissertation.

Chapter 2 is a review of literature where it provides an overview of heterogeneity & project management fundamentals. It also examines the concept of heterogeneous cultural intelligence in managing projects highlighting the concept of cultural intelligence, and underlining the cultural heterogeneity challenges. Furthermore, it features the innovation concept in general and in UAE particularly. It also give a highlight on the successful delivery of innovation in managing projects discussing the heterogeneity and decision judgments as well as effective leadership styles towards innovation.

Chapter 3 is about the Theoretical & Conceptual Frameworks. It provides a detailed analysis regarding cultural intelligence emphasizing on the four factors that makes it: Cognitive and Metacognitive CQ, Behavioral CQ, and Motivational CQ. Additionally it measures each only of those factors and relates them to the overall purpose of this paper.

Chapter 4 is about the Research Methodology. This research used a quantitative approach and the study process were highlighted. Moreover, the questionnaire design method and the survey development was explained and linked to the sample size.

Chapter 5 determines the Data Analysis. This chapter stressed on the phase of data collection and a reliability and validity test was executed. In addition, a descriptive analysis of the responses was performed using QuestionPro and Microsoft Excel.

Chapter 6 is Findings Discussion which describes cultural dimensions and teamwork, main cultural challenges in decision-making, cultural diversity traits influence effective leadership/innovation, cultural diversity knowledge, and capabilities in cultural diversity

Chapter 7 is a Conclusion. It gives a brief summary about the research findings, and describes the theoretical contributions to serve the purpose of this research. Similarly, it shed the light on the managerial style implications and give emphasis to the study limitations and future research recommendations.

# **CHAPTER 2: Review of Literature**

## **2.1 Introduction**

Nowadays, in the world of management ideologies and practices, innovation has become the major drive for ongoing advantage which creates radical shifts in competitive positions for any business. Nelson and Winter (1982) has developed a vital theoretical advance towards addressing innovation. They have seen innovation as something that is mostly taking place in heterogeneous type of organizations. They claimed that these organizations observes the world in a different way where they performs dissimilar habit and/or routines that leads them to make diverse strategic decisions.

Many researchers and academics agrees that one of the main common organizational competencies is to encourage and maintain innovative work environment. According to the UAE National Innovation Strategy (2015), the United Arab Emirates has continuously been well-known and marked as an icon and symbol for creativity and innovation. In record time, UAE boosted its economic and social position and transformed to become a primary destination for various businesses and talents worldwide.

There is a direct relationship between heterogeneity and innovation, bearing in mind the impact of cultural intelligence as an intermediating factor. Cultural intelligence entirely goes between the influence of heterogeneity and innovation within a workplace environment. The impact of cultural intelligence factors shapes the characteristics and behaviors of many employees, decision makers, and departments' culture.

The intent of this chapter is to provide a constructive analysis on heterogeneity and cultural intelligence and how can both influence delivering innovation in the United Arab Emirates. The investigation of the research will evaluate the major methods towards success in delivering innovation in managing projects. It will underline the common elements that are consistent with

heterogeneous project management and emphasize on the importance of project managers' role in decision making considering all the ongoing challenges and leadership traits associated with it.

In addition, the primer concentration of this literature review analysis is to define the diverse aspects deliberated with cultural intelligence and heterogeneity headed for delivering innovation in projects within the United Arab Emirates business frame. In addition, the paper will discuss the appropriate features related to managing innovative projects successfully. Also, it will be assessing theoretically the common and operative practices available to manage heterogeneous project teams. Besides the literature review will outline the different managerial leadership styles that plays a significantly important role in managing projects, project teams, and ultimately delivering innovation effectively. The subsequent section in this chapter will demonstrate the heterogeneity concept and the project management fundamentals.

## **2.2 Heterogeneity & Project Management Fundamentals**

There are many elements and components that interpret and interrelate with heterogeneity notion in managing projects. This section will demonstrate the different forms of heterogeneity that will analyze the main practices where background cultures, abilities and personal qualities are shaped. In addition, it will shed the light on the observed reviews clarifying and supporting the existence of heterogeneity in managing projects and how it does at the end deliver innovation.

The common approach in managing projects is simply a start-to-finish series of activities that aims to get things done and ensure a successful result. It is considered as a profession for some people like project managers where they are aware about defining the different stages of a project, manage resources, maintain quality, and monitor the allocated budget, cost, and risk against the project scope and timelines. However for other people in day to day life, it consist of a set of techniques that they have and can apply to reach the project's goal and manage the work effectively.

Heagney (2016), claimed that the project management fundamentals has help out lots of project managers to steer and control the ins and outs in every phase of a project. Therefore, Richman (2002) explained the fundamentals of project management as the followings:

- Define the project problem
- Establish goal and objectives
- Build a project plan to manage resources
- Meet deadlines, and closing the project.

Nonetheless, identifying the project management fundamentals doesn't ensure success on its own, managing the continuity of a project by providing reports on the project performance, keeping a project milestones on track, and ensuring customer satisfaction are all extensively important aspects of realizing success in managing a project.

Additionally, the PMBOK 4.0 presented the triple constraint model with 6 factors to be considered for project monitoring and managing. It is explained as a 6 pointed star which are preserving the triangle analogy strength (two overlapped triangles), whereas at the same time representing the relationship and separation between the factors of the project inputs/outputs on one triangle and the factors of project processes on the other triangle. The first triangle star variables demonstrates: Scope, Cost, and Time. While the second triangle star variables are: Risk, Quality, Resources.

Hence, in reference to Basu (2016), it is sensible to adopt and cover the basic elements in managing any project. He stated that it is usually innovative to form a coalition of heterogeneous ideas towards delivering innovation in a project. The crucial focus must be on getting the support of the project manager who owns the control over the main resources and has the highest inspiration on the project outcomes.

## **2.3 Heterogeneous Cultural Intelligence in Managing Projects**

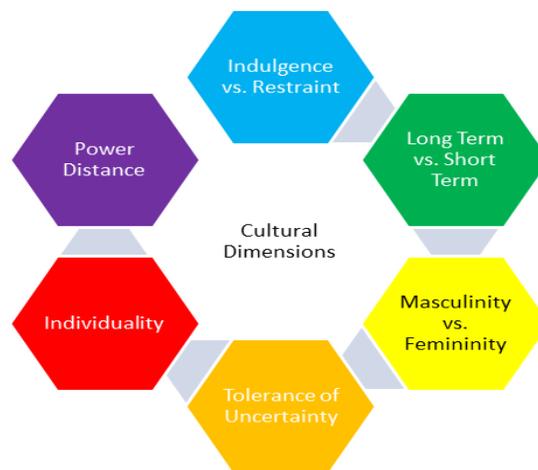
### **2.3.1 Introduction**

Culture has been defined as a manner of thinking, feeling and reacting which is learnt and transmitted thru symbols that shapes the human groups distinguishing achievements and their attached values (Kluckhohn, 1951). This paper is examining the impact of heterogeneous cultural intelligence on managing projects within the United Arab Emirates and also underlining the differences in cultures which can intensely influence and/or impact innovative project teams and their outcomes. Thus, people's cultural background and nationality usually influence the way of working and communicating among team members. It similarly indicate how project managers can deal with such cultural differences within a project team towards innovation. The purpose is to study how the difference in cultures correlate and bridge when team members are working together on a specific project. The concentration is on people in general and employees in particular who moved from different countries to live in UAE and work or start a business, they all are working on their own projects but the adding value is that they are coming from diverse nationalities and cultural background, putting together different thoughts and ideas which creates a unique and innovative standard of living.

Culture is a method of performing things in a society and with a specified group of people, but during a time period, where the inherited cultures tempted to change (Swaddling, 2011). Besides, Moore (2009) claimed that heterogeneity of culture in management occurs where stakeholders usually involved, like when team members are coming from altered cultures. The key initial valued feature of heterogeneity in managing projects is the culture notion. In this favor, the culture evaluation is reflected within the culture sympathetic as a set of principles discussed by a group of people.

Consequently, heterogeneous cultures is estimated by emphasizing on its presence and existence as norms, beliefs, and life style of people. Having said that, it is common that every culture has its several sub-cultures (Singleton, 2014). For example, while some people working in a project within a business have the same organizational culture, each team member would interpret and do their task based on their own sub-cultures which came from different background and life experience. Culture in this framework of study analysis is observed at the national level (Clegg and Kono, 1998). According to Geertz (1973), culture is defined as an inherited fabric of means and ideas by which people usually interact, perpetuate and expand their own knowledge to reflect their experience and lead their action headed for life. As a result, appraisals usually depends on the nationalities differences towards study analysis.

Moreover, Hofstede (1994) developed the Hofstede theory of cultural dimensions where he argues that cultures differ at the national level (See figure 2.2). He defined culture as the mind collective programming that differentiates the members from one human group to another (1980 – 1991).



**FIGURE 2.2: Cultural Dimension by Hofstede (1994)**

His theory claims that diverse countries have diverse cultures and/or value-systems that be compared by looking at a number of dimensions along with cultures. Hofstede argues that the dimensions of culture are just a framework which helps assessing a particular culture and hence a better guide to make decision. Correspondingly, there are further factors to consider like family

history, personality, and personal wealth. However, his proposed dimensions does not predict individual behaviors and also does not consider individual personalities. (Hofstede, 1994).

### **2.3.2 Cultural Intelligence**

Considering the openness of civilization and globalization in UAE, cultural intelligence has become exceptionally important due to the growing interactions between people from diverse cultures (Thomas and Inkson, 2009). In many business settings, it became crucial, for people in general and project managers in particular, to be able to handle and resolve conflicts that arise from daily interactions with diverse customers, clients, colleagues, and other stakeholders' surroundings (Budworth and DeGama, 2012).

In reference to Engle and Crowne (2014), the cultural intelligence thought and acceptance can be influenced by every individual background experiences. In the context of many organizational factors such as establishing a pre-departure training, was found significantly effective to result in increasing cultural intelligence qualities (MacNab, 2012; Moon, 2012; Engle and Crowne, 2014). Along with Groves and Feyerherm (2011) and other researchers on the same perspective, cultural intelligence is found to be connected to numerous other theories like cultural adjustment and adaptation as well as cultural judgment and decision making (Imai and Gelfand, 2010), and performance (Wu and Ang, 2011).

Additionally, according to Ang et al. (2007), cultural intelligence is understood and illustrated as a multidimensional construct where it doesn't have a single approach of ability or skills. It offers a holistic sight of diverse abilities which drive individuals to show effectiveness in the new culture (MacNab et al., 2012). However, emotional and social intelligence approach exhibit a single ability. They are abstracted as a theory with less attention on the context of intercultural (Earley and Ang, 2003). Thorndike (1936) claimed that social intelligence discusses the individuals' general capability towards understanding and managing others in human relations. Whereas, Emotional intelligence, consistent with Budworth and DeGama (2012) is the capacity to handle the individual's own emotions in additions to others. What is more, cultural intelligence is intended

for skills of non-culture-specific (Livermore, 2011). Means, the proficiencies conveyed as cultural intelligence are made-up to be flexible across many cultural settings.

There are three key aspects and/or approaches of literature on cultural intelligence to be deliberated. First approach is the concept of Earley and Ang's where it consist of metacognitive, cognitive, motivational, and behavioral cultural intelligence. Second approach is the concept of Thomas's where it debate knowledge, mindfulness, and skills. Third approach developed by Peterson the concept that is based on multiple intelligences.

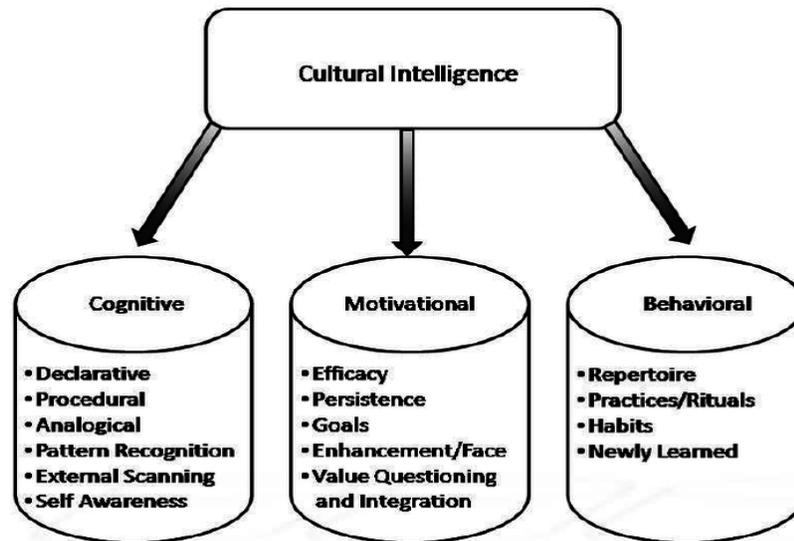
This paper examines how the cultural heterogeneity of team members working on a particular project regulates the way in which cultural intelligence influence the development and innovation of the team common values. In the following sections the research will determine how each factor and/or element of cultural intelligence impact the innovation of common values in managing projects within heterogeneous project team.

### **2.3.3 Concept by Earley and Angs**

In 2003, Earley and Ang proposed that the hypothesis of cultural intelligence depends on 3 main elements: cognitive, motivational, and behavioral. They described the process over which individuals effectively adapt to changing cultural contexts depending on these three leading aspects. However, as stated by (Engle, Dimitriadi, and Sadrieh, 2012; Moon et al., 2012) and most of the other cultural researchers who implemented Earley and Ang's concept of cultural intelligence shed their focus on four sub-components (as mentioned below) instead of the three general aspects by Earley and Ang.

- i. Metacognitive,
- ii. Cognitive,
- iii. Motivational,
- iv. and Behavioral.

Several researchers on the same topic considered metacognitive and cognitive cultural intelligence as one element of cultural intelligence (Ang, Earley, and Tan, 2006) relying on the similarity of the mental processes in these two. (See Figure 2.3).



**FIGURE 2.3.3: Cultural Intelligence by Earley and Ang (2003)**

### **2.3.3.1 Metacognitive Cultural Intelligence**

The first aspect of cultural intelligence is considered crucial for launching and creating the ability in order to build a fresh perspective and operate within a new culture (Earley and Peterson, 2004). Earley and Ang (2003) has proposed three elementary questions towards understanding people within a new culture.

First question “what are the ways that can determine what I am like and what might someone else be like?” Earley and Ang (2003) described that the first question is used to support individuals toward developing and understanding strategies for a new setting of culture. The second question was “what is this person like and why are they this way?” Diverse forms or styles of decision making and reasoning could drive individuals to establish a map of cultural towards other people.

Accordingly, based on the second question, reasoning and decision making may perhaps lead persons to ask the following question: “what can people be like and why?”

Therefore, Earley & Ang (2003) claimed that in order to make sense out of the above three questions, individuals require higher-order of mental processing to mirror and incorporate new knowledge. Lin et al. (2012) stated that metacognitive cultural intelligence is a higher mental process which benefits individuals replicate on and understand their cultural knowledge. Flavell (1979) has defined metacognition as the cognition and knowledge that is related to phenomena of cognitive. Also he defined it as “thinking about thinking” (Earley and Ang, 2003). Hence, Flavell (1979) clarified that the monitoring of metacognitive can arise over basic serious of actions. For example, in strategies of metacognitive, it comprise of a cognitive judgment or procedure facilitated towards achieving certain anticipated goals. Earley and Ang (2003) appealed that this strategy of metacognitive aims to confirm to individuals that the right answer is found. As a result, metacognitive cultural intelligence is one of the empirical evidence of linking heterogeneity and innovation which has provided diverse results in terms of enhancing innovation (Anderson, Potočnik, and Zhou, 2014).

### **2.3.3.2 Cognitive Cultural Intelligence**

In line with Earley & Ang (2003), cognitive cultural intelligence is related to mental knowledge of individuals or demonstrations of their environment termed “schemas” where they link their ideas and perceptions. They described three knowledge types; First, declarative knowledge which implicates knowing information about things that is potentially extended by asking people and/or colleagues common questions about the setting of a new cultural. Second, procedural knowledge which contains knowing or understanding how to function things, and it is regularly can be learnt through observation and copying others. Last is conditional knowledge, it includes knowing the when and why of things. Hence, this would necessitate individuals to be capable to relate and apply the knowledge of procedural and declarative at the right time and setting (Earley and Ang, 2003).

Subsequently, Earley & Ang (2003) claimed that making decision in the right time and setting might take place in several types of reasoning like inductive and analogical reasoning. Additionally, they stated that people are diverse in their methods in order to reason about why and how they perform in a certain way or else to take the decision that they do. For instance, in dissimilar cultural settings, the context of culture impacts people's responses towards a new environment. Therefore, it is significantly vital to observe, identify, question, and create cognitive and metacognitive approaches for dealing with a different and new cultures.

Consequently the suggestion Earley & Ang (2003) provided is that the capacity to create accurate and effective exemplifications of different cultures entails two sorts of intellectual information processing:

- a) Intrapersonal cognitive processing such as knowing the when and how of things,
- b) and the processing of metacognitive, such as the accuracy of judgment of learning.

In reference to Ng and Earley (2006), these processes let individuals understand their own cultural practices and norms, in addition to the ability to generate knowledge around differences in cultures. Having said that, authors stated that individuals that have high cognitive cultural intelligence and metacognitive cultural intelligence more expected to be effective and innovative in heterogeneous cultural settings than individuals which have low cultural intelligence in cognitive and metacognitive.

### **2.3.3.3 Motivational Cultural Intelligence**

Motivational cultural intelligence discusses the aspirational and need towards adapting a new cultural settings with constant learning and operating in a new environments (Blasco, Feldt, and Jakobsen, 2012). The subject of motivation in cultural intelligence is rarely used in researches, nevertheless, Earley and Ang (2003) debated that intellectual processing itself doesn't sufficiently encourage individuals to reveal their new cultures understanding. Thus, as discussed by Livermore (2011), people should have appropriate need or motivation in order to successfully interrelate in new cultures.

People's need is a factor which drives them to work, action, and innovate. Earley and Peterson (2004) has indicated that it is challenging for people to be or feel comfortable in a new heterogeneous culture without having the self-assurance in their skill to effectively engage. In addition, MacNab et al. (2012) stated that goal setting is one of the main qualities of motivational cultural intelligence. Locke and Latham (1990), mentioned that it is one of the most effective strategies that improve performance levels in organizations. Austin and Vancouver (1996) specified that it is the nature of human behavior to be motivated and structured towards innovation by having a set of aspirations and goals.

Henceforth, individuals with high motivational cultural intelligence are more expected to value the interactions of cross heterogeneous cultures and deliberate the tasks of cross cultural as motivating and stimulating than the others that have low motivational cultural intelligence. Moreover, individuals with high motivational cultural intelligence consider learning, innovation, and achievements in new heterogeneous cultures as a reward which inspires them pursue the learning journey and function appropriately in diverse cultural settings.

#### **2.3.3.4 Behavioral Cultural Intelligence**

Overt behaviors may be shown in languages and communication whereas covert behaviors consist of diverse kinds of invisible behavior aspects (Van Dyne et al., 2012). According to Macnab et al. (2012), behavioral cultural intelligence is referred to the behaviors that is intentional-observable in many heterogeneous cultural environments. Consequently, Earley and Ang (2003) has described these behaviors hardly to contain merely overt or observable behaviors, and hence, both are verbal and non-verbal. Metacognitive cultural intelligence has already discussed some of the invisible aspects of behaviour like thinking and motivation. However, there are other features of behavioral cultural intelligence only focuses on behaviors that influence and have an impact on the social environment in heterogeneous cultures and/or altered contexts of cultures, but not within one culture (Earley and Ang, 2003). To sum up, behaviors of cultural intelligent are magnitudes of metacognitive, cognitive, and motivational components of cultural intelligence. Hence, these behaviors should be planned, decisive, and motivational-oriented, and their purpose must display self-presentation.

Along with Earley and Ang (2003), people with high behavioral cultural intelligence can develop the skills of self-presentation and build a higher self confidence in settings of cross heterogeneous cultures than people that have low behavioral cultural intelligence. Also, the authors continued to describe that higher behavioral cultural intelligence is a result of high cognitive, metacognitive, and motivational modules of cultural intelligence. Thus, if individuals cannot mature their behavioral cultural intelligence in across heterogeneous cultural setting, they may possibly be let off from new cultures. They might later develop problems as lack of harmony and innovation and ultimately mental health because it will be very difficult for them to function and operate appropriately within the new culture.

### **2.3.4 Cultural Heterogeneity Challenges**

According to Dibble and Gibson (2013), there is no such thing as embedded in a single organizational context because multicultural collaborations are not permanent entities but they can complete tasks even though coming from multiple cultures. Multicultural teams share characteristics but there is lack of embedding mechanisms in organizations. In this study, they examined 16 multicultural organizations about their cultural heterogeneity's degree. The findings of this study showed that they are facing various challenges due to multicultural collaborative work. Due to lack of embeddedness in organization, the process of adjustment is at suffrage. In addition, in order to adjust, there is need for collaborations so they can utilize various range of internal and external strategies. Furthermore, when teams are facing challenges of collaborations, then they are working with each other based on understanding of cultural differences so they are able to make vital adjustments. In the situation of significant challenges, there is relation between multicultural collaborations performance for careful setting of strategies required for adjustments to the nature and magnitude of challenges. There are effects on the team development for values sharing due to cultural heterogeneity of work teams. Adair, Hideg, & Spence, (2013) finds metacognitive and behavioral cultural intelligence shows positive effect in culturally heterogeneous teams on their shared values. On the other hand, metacognitive and motivational cultural intelligence shows negative effect in culturally heterogeneous teams on their shared values.

Zwikael, and Smyrk (2011) describes that the level of team differences due to diversity becomes challenging resulting in difficulties to achieve agreement or ideas. Similarly, due to team diversity it becomes difficult to work together and not necessarily solving problems due to perspectives and skills availability. Therefore, during increased problems among team members, there will be increased interpersonal stresses and conflicts from cultural heterogeneity. The process of taking advantage for team effectiveness will be at suffrage. (Schermerhorn, et al., 2012) Kandola, and Fullerton (1998) claims that the challenge of maintaining cohesiveness affects group thinking. It indicates that culturally heterogeneous teams do not necessarily impede progress where achievement of consensus becomes another challenge.

### **2.3.5 Summery**

To Sum up, the focus of this section is on cultural intelligence elements and how does it directly relate to heterogeneity and leads to development and innovation in managing projects. Cultural intelligence consist of metacognitive, cognitive, motivational, and behavior components. It highlights and analysis the concepts and results which show how behavioral and metacognitive cultural intelligence have got a encouraging influence on the common values in cross heterogeneous cultures. However, motivational and metacognitive cultural intelligence have got an undesirable influence on common values in cross heterogeneous cultures. Therefore, in a working environment, all these influences can be perceived in the phase of selecting a heterogeneous project team in order to manage a project that aims at the end of the day to deliver innovation. By discovering all the encouraging and undesirable impacts of cultural intelligence in a project team values, the paper underlined the implications that is identified by Earley and Ang (2003) theory and arguments regarding the practice of a heterogeneous project team culture towards innovation.

## **2.4 Innovation**

### **2.4.1 Overview**

In this day and age, the governments' role in cultivating and enhancing innovation has become comprehensively considered. A lot of studies are currently focusing on the role of governments in the developing and developed countries towards delivering innovation. Therefore, according to Lemaitre (2017), the role that is played by governments in endorsing and encouraging Innovation didn't appear to be shared when it comes to Innovation studies and analysis within governments. Lemaitre (2017) argues that there is one likely reason which indicates the perception of people world widely around governments and their lack of innovation by nature, where it is hardly for citizens to link Innovation with governments. Additionally, innovation tends to appeal to considerable attention (after research) whenever it is associated to the private sector; i.e. technological developments, introducing new products and services...etc.

### **2.4.3 Innovation in UAE**

In the United Arab Emirates, the innovation term is getting more and more popular in governments practices, organizations, education, and researches. In view of the global economy, the purpose is to condense the recognition, with the increasing dependence of its societies on communication and knowledge, progress in the efficiency, effectiveness and relevance of the products, processes and systems at different standards in all capacities is key to maintaining competitiveness, and meeting the future challenge.

The consideration of this research is to focus on the organizations' necessary framework, not to describe innovation aspects only, but to examine how heterogeneous cultural intelligence can have an impact on building a concrete logic for organizations' practices. Therefore, this paper will demonstrate the crucial focus on the processes of managing projects that must be reinforced by any business in UAE. Heterogeneity and cultural intelligence are considered significantly vital as key drivers to deliver innovation in managing projects. According to Kleinknecht (1989), there

are many arguments that discuss the advantages and disadvantages of delivering innovation in managing projects by focusing on the heterogeneity and cultural intelligence factors.

In agreement with the UAE National Innovation Strategy (2015), The UAE leadership believes that the future of human investment is innovation, stresses its significance over all business sectors within the UAE Vision of 2021: “Innovation, research, science and technology will form the pillars of a knowledge-based, highly productive and competitive economy, driven by entrepreneurs in a business friendly environment where public and private sectors form effective partnerships.”

Additionally, the purpose of the National Innovation Strategy (NIS) is to proceed with innovation in the UAE to new levels, where heterogeneity and innovation culture is entrenched between individuals, companies and governments where it mainly concentrates on recognized priority sectors which will be driving innovation in the near future.

What's more, the NIS give emphasis to the prominence of attracting the top talented innovators and scientists in the world, and enhances a change on the road to multi-cultural and/or heterogeneous working teams and environments in order to share experience and knowledge which would help in building and developing strong innovation capabilities and skills. Also, the innovation significant importance lies on enhancing the performance of public sectors, where the NIS desires towards embedding an innovation culture thru all the entities of government. Additionally, it ambitions to promote UAE as a hub of innovation by constructing it as the leading country in this field for all government services globally. The objective is to be the innovation lead in governmental policies, processes and procedures towards increasing the whole efficiency.

## **2.5 Highlights of Successful Delivery of Innovation in Managing Projects**

### **2.5.1 Heterogeneity and Decision Judgments**

The consideration of the demographic variables like age, role, and gender moderate and steer a clear revision and formation of the project decisions requirements that are made by practitioners during the project life cycle. Hence, having to understand the impact of those moderating aspects on decisions that are made by PM practitioners could add value into a more effective decisional judgments.

One of the basic principles of the theory of project management is the necessity to smooth collective decision making and forecast management expectations. Schuler (1980) stated that many researchers have illustrated that practitioners and organizational aspects have an effect on the group-decision creating effectiveness.

For instance, Koskinen et al. (2003) claimed that the practitioner effectiveness during the group decision making is impacted by implicit knowledge, while Cheng et al. (2005) and Hodgson (2002) said that it's influenced by the professional ability. Clarke (2010) mentioned that it's linked to the emotional intelligence and personality, while Fowler and Walsh (1999), claimed that it's affected by decision judgments. This section will examine and analyze the judgments of practitioner decision that are based on the project's gender, age and role factors that are most probably to influence the effect on stated judgments on the project's success or failure during the lifecycle of the project.

In addition, it is significantly important to understand the practitioners' decision judgments towards a project's success or failure as it will raise awareness of judgments which will stimulate the communication during a project, and it will inspire the relationships power among the project team members, subsequently, will highpoint the decision judgments differences. However, having neglecting the consequences of the decision judgments would lead to considerable confusions between the project team and suboptimal decision making.

## **2.5.2 Effective Leadership Styles towards Innovation**

Gotsis, & Grimani (2016) finds that inclusive climates and informing caring arises importance of leadership theories such as spiritual, servant, authentic, and ethical leadership. While design and implementation of inclusive initiatives, there is need for consideration of diverse leaders so diverse followers can interact with them. Therefore, leadership styles should be encouraged so intrinsic value of diversity and goal attainment can be combined. Through particular conditions and strategies, it is possible for organizational leaders to fulfill and thrive diverse team. Witkemper (2012) examined heterogeneous teams' performance with homogeneous leadership teams. According to findings made, it showed that diversified team does better performance with diversified leadership styles. The results also indicated that there is no impact on performance from team cohesion, organizational citizenship behaviors and impression.

Winkler, & Bouncken, (2011) states for sustained innovation performance, there is use of global innovation teams by international firms. Cultural diversity affects innovation and team performance. Leaders play important role in innovation facilitation across multiple stages and multiple levels of the process of creativity. Individual leader should possess problem-solving skills at the organizational structure and the group level. Across different types of innovations, there are propositions made for leadership effects. (Friedrich, et al., 2010)

Rossberger, & Krause (2015) explains that there is no direct relationship between prevailing leadership style and national innovation. However, the educational level shows positive relationship with participative leadership style and negative relationship with team-oriented leadership style. In another study by Somech (2006), the data results showed that participative leadership style is in positive relationship with heterogeneous team's outcomes and processes. It is also associated with fostering innovation and reflection in teams. However, due to participative leadership style, there is decline in the performance role played by teams. Team reflection was observed to be promoted through directive leadership style under low functional heterogeneity.

Transformational leadership style adopts team related shared vision (Schippers, et al., 2008). There is positive relationship between individual adaptive performance and team-level climate of transformational leadership. There is need for stronger innovation climate so relationship between adaptive individual performance and transformational leadership style can be enhanced. (Charbonnier-Voirin, et al., 2010) Homan, & Greer (2013) present that diverse team shows superior fondness for thoughtful leadership. The reason is that highly considerate leaders improved interaction between consideration and group diversity for proper team functioning.

## **2.6 Summery**

In this chapter, a demonstration about heterogeneity and cultural intelligence was presented in order to study their impact and influence on innovation in managing projects. Moreover, the chapter explained the topic of innovation at the present time and how it became a significantly major drive in the United Arab Emirates. Also it highlighted the concept of cultural intelligence which has become extremely important due to the growing interactions between people working in heterogeneous projects within diverse cultures and how it can lead to innovation. Hence it described the concept proposed by Earley and Ang (2003) that define the main elements of cultural intelligence cognitive, metacognitive, motivational, and behavioral. Additionally it shed the light on some factors that drive the successful delivery of innovation in managing projects such as leadership styles and decision judgments.

Finally, we concluded from the literature review a number of focus areas that are associated with heterogeneity cultural intelligence towards innovation in managing projects in UAE which will establish our conceptual framework model for this research. Therefore, the following chapter will examine the research methodology adopted to developing methods, designing a questionnaire, collecting data, and utilizing appropriate statistical test to analyses the proposed hypotheses.

# CHAPTER 3: Theoretical & Conceptual Frameworks

## 3.1 Introduction

The conceptual model of this study consists of cultural intelligence (CQ) as independent variable and the dependent variables are metacognitive CQ, cognitive CQ, motivational CQ, and behavioral CQ (see Figure 3.1). This research attempts to study the relationships between CQ and the three components with decision-making, effective leadership and innovation. Therefore, the following conceptual framework illustrates the relationship, which is also given in the literature review.

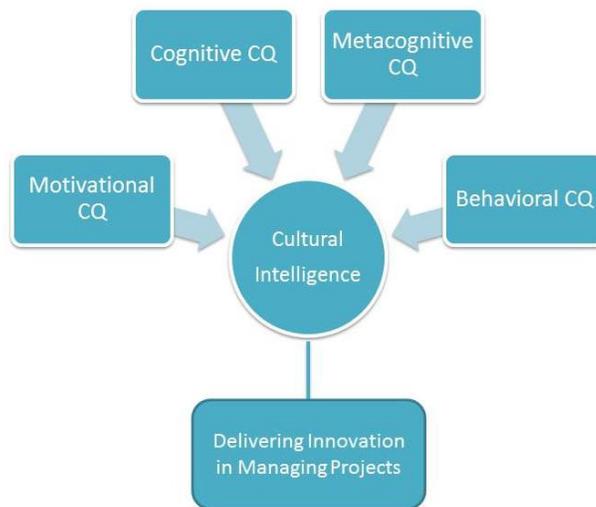


Figure 3.1: Conceptual Framework

In the past, intelligence was viewed as solve problems and grasp concepts but the focus is more these days due to growing interest in real-world (Sternberg, and Kaufman, 2011). Intelligence contemporary conceptualizations emphasis is more than academic cognitive ability or intelligence such as managers and researchers recognize the importance of other intelligence such as CQ. Individual capabilities insight can be achieved through CQ to flourish in and cope with multicultural situations, engage to interact in intercultural, and effectively perform in work and social groups that exhibits cultural diversification. (Clegg & Bailey, 2008)

## 3.2 Cultural Intelligence (CQ)

Ang, & Dyne (2015) defined cultural intelligence where ability of individual to function in situations with effectiveness is characterized based on cultural diversity. CQ is usually targeted during interactions with cross-cultural showing differences in nationality, ethnicity and race. The ability of an individual is increased through CQ where an individual connects with others and they are not necessarily from his or her own culture (Earley & Ang, 2003; Ang, et al., 2007). Lévy-Leboyer (2007) and Earley, and Mosakowski (2005) defined CQ as an individual's ability to interpret ambiguous and unfamiliar gestures of outsiders that comes naturally. Therefore, CQ is the body's composition such as head and heart that takes motivational, emotional and cognitive capabilities to work within the environment of intercultural.

According to Heckman (2004), the concept of CQ requires behavioral capability, integration of facets of knowledge and mindfulness. Therefore, the culture is dealt under knowledge where understanding of cultures is the basic that involves various cross-cultural interactions that consists of process knowledge. In mindfulness, it is higher awareness with attention to present reality or current experience.

Culturally intelligent individuals learn to make adjustments even in unfamiliar culture so they are able to do strategic thinking in culture showing both acquiring cultural knowledge and learning. Managers can stay motivated when they energize themselves while working within the context of intercultural. (Tan, 2004)

According to Sternberg & Grigorenko (2006), CQ understanding is within the relevance of intelligence within the context of culture. It shows that CQ is applicable across various cultures. The understanding of CQ in a broader way is gained through the cultural observations of intelligence. Turner & Trompenaars (2006) describes that cultures are about values where cultural studies takes place but there is need for verifiable propositions and scientific objectivity and presenting the CQ concept credibility.

Ting-Toomey (2014) and Gupta, Govindarajan, & Wang, (2008) theorize that CQ is mindfulness where there is relationship between behavior and knowledge where CQ exists and development

takes place overtime. The beginning of CQ takes place by acquiring knowledge, gaining perspectives with presence of alternatives by means of mindfulness and accommodating knowledge based on capabilities coming from behavior of individuals. Clegg, & Bailey (2008) and Gooden, Creque, & Chin-Loy (2017) describes the concept of CQ as individual difference and not an aspect of personality so there are specific individual difference but can be influenced due to characteristics in stable personality. Based on continuous education, training, experiences and exposure to international and multicultural situations, it is possible that CQ capability can be developed. Similarly, Earley & Ang (2003) also mentions that CQ captures cognitive processes and contents that consists of aspects related to setting-specific. The concept of CQ consists of three components and they are motivational CQ, cognitive CQ, and behavioral CQ (Ang, et al., 2004). Gooden, Creque, & Chin-Loy (2017) and Guðmundsdóttir, (2015) finds that there are relationship between motivational CQ, cognitive CQ, meta-cognitive CQ and behavioral CQ

### **3.2.1 CQ and Decision-Making**

The components of CQ were tested against cultural decision-making and cultural judgment where cognitive CQ and meta-cognitive CQ showed cultural decision-making and judgment (Ang, et al., 2007). Janssens & Brett (2006) CQ model describes facilitation of realistic and creative decisions during global teams collaboration. Due to differences in cultural background, there are differences in decision-making approach (Maznevski & Di Stefano, 2000).

### **3.2.2 CQ, Effective Leadership and Innovation**

According to various authors, CQ is important for leadership effectiveness (Elenkov & McMahan, 2005; Alon & Higgins, 2005) and particularly for transformational-visionary leadership. In the global project, there is indication of complex interaction between leadership styles and cultural variables (House, Javidan, Hanes, & Dorfman, 2002).

Ang & Ng (2005) point out that CQ is important to equip people with necessary qualities of leadership so they can gain suitable knowledge, motivation, behavior and strategy to function effectively in diverse cultural backgrounds with broader, open-mind, and global mindset. Deng &

Gibson (2008) also finds that cross-cultural leadership capabilities are improved due to CQ capability so leaders can influence positively, as they have motivational cultural adaptation, cultural awareness and behavioral skills. It shows that leadership effectiveness can be achieved with not only cross-cultural communication but also multicultural workplaces.

Rockstuhl, et al. (2011) finds CQ as critical to leadership competency so managers can handle intercultural situations effectively when they have cross-border responsibilities. Kessler (2013) describes that CQ and leadership are linked as managers are able to recognize shared beliefs, attitudes and values while understanding customs, traditions and norms of a group. Barak (2005) also finds that for effective leadership, there is need for cultural awareness within the context of diversity.

Leaders with high CQ exhibits effectiveness in accomplishing and promoting innovations as they act role model for followers coming from different cultures and having different meanings. Therefore, CQ helps leaders to become effective leader as they will be able to grasp quickly and adapt behavior. Accordingly, leaders with high CQ improves successful innovation with culturally suitable goals so better outcomes and objectives can be achieved. (West et al., 2003; Earley & Ang, 2003; Yukl, 2006)

Gölgeci, Swiatowiec-Szczepanska, & Raczkowski (2017) explain that CQ is utilized for innovation by linking absorptive capacity and innovativeness where leaders are able to explore diverse and new knowledge sources. Winkler, & Bouncken (2011) also explains that use of global innovation teams is necessary so sustained innovation performance can be achieved. According to findings made, it shows that there are effects of communication style and cultural value differences within global innovation teams.

Elenkov & Manev (2009) demonstrates role of CQ between organizational innovation and transformational visionary leadership. Therefore, the higher CQ then the better is positive influence of leadership on organizational innovation. According to Groves & Feyerherm (2011), CQ of a leader is highly linked with team performance when there is more heterogeneous group.

Turner (2007) explains that in order to promote cross-cultural sharing of innovation and ideas, there is need for organizing teams and creating structures. However, there is absence of formal coordination for projects innovations so informal networks are acceptable. Livermore (2011) draws that CQ is a creative for innovation when tensions are created. In multicultural settings, people facing tensions lean into the insights and opportunities so creativity that is more interesting happens forcing into it. Miller (2016) writes that innovation and creativity comes through learning to expand and negotiate within multiple cultural background consisting of overall sense of creativity and innovation. The findings showed there is positive correlation between CQ and innovation.

### **3.3 Cognitive CQ**

Adomako (2011) summarize that cognitive CQ is about cultural knowledge of practices, norms, and conventions by an individual in different cultural settings. In contemporary era, cognitive CQ shows knowledge of cultural differences and cultural universals. Clegg & Bailey (2008) explains that cognitive CQ reflects both knowledge structures and general knowledge about culture. Therefore, cognitive CQ is an understanding and knowledge possessed by a person about how cultures are different and how cultures are similar. It consists of about mental maps and knowledge structures about culture. It also contains knowledge about legal and economic systems, religious beliefs, aesthetic values, norms for social interaction, and language in different cultures.

#### **3.3.1 Cognitive CQ and Decision-Making**

Earley & Ang (2003) present that cognitive CQ exploration is through basic questions to understand culture where different reasoning are conducted for cultural understanding so decision-making can be done. In order to develop a cultural map, there is use of different decision-making styles across cultures based on various reasoning.

Ngunjiri and Madsen (2015) agree that cognitive CQ assists in the understanding of norms, values and behaviors across different cultural environments so it is important for decision-making in

different and diversified cultural settings. Ang & Dyne (2015) describes the role of cognitive CQ in decision-making as top executives behavior is affected influencing executive decision-making. David (2009) also finds that decision-making effectiveness is possible through higher cognitive CQ where cultural schemas elaboration occur with defined representations of social interactions. In addition, individuals with high cognitive CQ can adapt to diverse environment and make better decisions.

### **3.3.2 Cognitive CQ, Effective Leadership and Innovation**

Teams with cognitive diversity allow more creativity and innovation. Cognitive ability is linked with leadership emergence. Leadership tasks have been changing and shifting from management to leadership tasks with emphasis on entrepreneurship. Leaders solve problems with innovative solutions based on new perspectives. (Kadir, 2014; Kessler, 2013)

Maran, Martinelli, & Turovski (2011) states that cognitive innovation allows people to move from a culture to another culture based on new capacities narrations. Using mental models, the way of thinking is modified by cognitive innovation. For example, the famous saying such as thinking outside the box is related to the mental ability that can be applied in specific and given situation. (Laurent, 2013)

### **3.3.3 Cognitive CQ and Metacognitive CQ**

Ngunjiri, and Madsen (2015) summarize that both cognitive and meta-cognitive CQ are related with some slight differences such as cognitive CQ deals with cultural differences understanding while meta-cognitive CQ deals with cultural awareness conscious within executive processing during interactions in cross-cultural. Sternberg and Kaufman (2011) describe that cognitive CQ focuses on knowledge of cultural universals and differences. It refers to knowledge structures of a person. According to Clegg & Bailey (2008), in meta-cognitive CQ, a personal is able to make sense of intercultural experiences. Therefore, it is about processes to acquire and understand culture while making judgments between own processes and others. Accordingly, the process of

meta-cognitive CQ starts as per strategizing multi-culture, confirming assumptions, and make adjustments when there are differences between mental maps expectations and actual encounters.

### **3.3.4 Cognitive CQ and Behavioral CQ**

Blake (2012) reports that behavioral and cognitive CQ activities help in the development of CQ so each employee skills sets can be developed as well. In this situation, there is need from organization to have structured programs that focuses on behavioral and cognitive skills development through procedural and declarative knowledge and opinion. According to Gooden, Creque, & Chin-Loy (2017) cognitive CQ can explain behavioral CQ where cognitive CQ influences both actions and behavior. Ang et al. (2007) confirm that both behavioral CQ and cognitive CQ do not show relation where having cognitive CQ not necessarily translated into behaviors and actions. Gooden, Creque, & Chin-Loy (2017) present that an individual is aware of differences in cultures but does not make changes in behavior for differences in culture accommodation. Meta-cognitive CQ influences behavioral CQ so individuals with high meta-cognitive CQ are aware of cultural situations so they are likely to make changes in their behavior so they can adapt themselves in these cultural situations. Shannon and Begley (2008) find that both cognitive CQ and behavioral CQ shows positive relationship during second language acquisition. Language is used as a tool so knowledge on intercultural can be obtained.

## **3.4 Behavioral CQ**

Behavioral CQ is the ability to act in multicultural settings with appropriateness. It defines the ability to moderate or change behavior so misunderstanding does not happen while interacting with various cultures. (Ngunjiri, and Madsen, 2015; Adomako, 2011) It also involves capability of an individual to exhibit proper verbal and nonverbal engagements during interaction with people from diverse cultural background. It is based on using and having broad range of behaviors that is important for CQ, as behavior is the most visible characteristic all through social interactions. (Clegg, & Bailey, 2008)

### **3.4.1 Behavioral CQ and Decision-Making**

CQ decision-makers are mindful about business decisions within ethical components showing the relationship underlying with cultural values and ethical behavior. They understand how people simplify the process of decision-making due to different cultural backgrounds. They are aware about their own goals and motivation in making decisions. Accordingly, they are able to adapt in the amount and type of information gathered, decision criteria weight and decisional participation related to exact cultural context within decision behavior. They are also respecting human beings and their universal rights. (Thomas, & Inkson, 2003)

### **3.4.2 Behavioral CQ, Effective Leadership and Innovation**

In behavioral CQ, the behavioral attributes displayed by leaders are due to cultural influences so many leadership behaviors should be expressed appropriately. Innovation can be predicted based on transformational leadership behaviors for effectiveness. (Michel, et al., 2015) CQ leaders should be able to deal with the disagreement between their behaviors, and attitudes. However, when the leaders fail they are not actually CQ leaders. It is very rare to see that organizational leaders are making changes as per their actions or beliefs to align with culture and diversity. (Moua, 2011)

The examination of multicultural leader is prompted due to globalization where cultural diversifications in work environments are increasing. Both organizational citizenship behaviors and CQ in a leader helps to voice behaviors at workplace consisting of diversified workgroup. (McComas, 2014)

Thomas & Inkson (2017) describes that CQ in leaders are aware that followers mind is filled with leadership so followers expect such leaders to be able to communicate their vision with the skill to organize followers consisting of specific behaviors. Accordingly, CQ leaders use such specific behaviors to do various things that are different across diversified cultures. At the same time, these leaders do not simply mimic behaviors of another culture while leading followers. Instead, they

are paying close attention to leaders showing effectiveness in the cross-cultural model and environment as per the behavior.

Culture consists of both intangible and tangible things that can be seen, heard perceived or felt based on leadership dimensions (see Figure 3.4.2). It is not easy task for business leaders to make changes in organizational culture. However, culture noticeable in insensible assumptions, values and behaviors that not only changes but also develops as new employees' joins organization. With the understanding of specific culture, such business leaders create awareness about leadership in different culture coming from different perceptions to understand how culture understands particular leader.

Dimension	Behaviors
Charismatic/value-based leadership	Inspires others, motivates, expect high performance; visionary, self-sacrificing, trustworthy, decisive
Team-oriented leadership	Team-building, common purpose, collaborative, integrative, diplomatic, not malevolent
Participative leadership	Participative and not autocratic; inclusive of others
Humane-oriented leadership	Supportive, considerate, compassionate and generous; modesty and sensitivity
Autonomous leadership	Independent and individualistic; autonomous and unique
Self-protective leadership	Ensures the safety and security of the leader and the group; self-centered, status conscious, face-saving, conflict-inducing

Figure 3.4.2: Leadership Dimension and Behaviors (Moua, 2011)

The activities and behavior of a leader focuses to control, plan, coordinate and organize. This differs from one leader to another such as based on tasks, and behaviors focus on change, trust, motivation, vision and innovation. (Moua, 2011) Behavioral innovation is evidential itself based on cultural major process (Dick, 2015). Both behavioral innovation and social learning tool forms part of cognitive traits in general intelligence (Hoppitt, & Laland, 2013).

### 3.4.4 Behavioral CQ and Motivational CQ

Behavioral CQ and motivational CQ forms positive relationship so it confirms individuals have behavioral CQ tendencies with motivational CQ attributes. The basis of motivational CQ is intrinsic motivation in individuals. (Ang et al., 2007) In addition, when individuals show interests

in cultural differences understanding then they do behavioral modification so they can accommodate such differences (Gooden, Creque, & Chin-Loy, 2017). Leaders should gather knowledge and gain awareness of how culture works such as values and beliefs based on individual's thinking and motivation and behavioral intelligence exploration (Moua, 2011).

Behavioral CQ and motivational CQ predicted cultural adaptation (Bryan, 2015). They can also predict various forms of adjustment such as work adjustment, interaction adjustment and general adjustment. People interested in other cultures, then they can interact with others from different cultural backgrounds, so they can adjust better in cultural diversification. Similarly, people with broad repertoire of nonverbal and verbal behavioral abilities feel adjusted during cultural diversity. Therefore, the higher in motivation CQ then the higher the process of adjustment will be. Moreover, the higher behavioral CQ means higher adjustment as well. (Clegg, & Bailey, 2008)

Rau (2016) explains that behavioral CQ and motivational CQ expect cultural adjustment and it is comparable to coping with perceived mastery and ambiguity throughout supportive messages. Adomako (2011) describes that both motivational CQ and behavioral CQ makes possible increase in interaction-related adjustments. The focus of both motivational CQ and behavioral CQ is on flexibility and drive in culturally different situations.

### **3.5 Motivational CQ**

The concept of motivational CQ is about the degree of drive and interest to adapt to new surroundings in culture (Earley and Ang, 2003). Cultural experiences are of value to individuals with motivational CQ. Therefore, these individuals enjoys while they are interrelating with other people coming from diverse backgrounds (Templer et al., 2006). Self-efficacy is one of the key characteristic of motivational CQ and it is connected with individual's capability judgment whether they can make accomplishments in a new culture at a certain performance level. (MacNab and Worthley, 2011) In another study by Earley and Gardner (2005), it is similarly recommended that individuals develop problem solving and strategic way of thinking with motivational CQ to overcome challenges throughout intercultural encounters.

Ngunjiri, and Madsen (2015) and Zlateva (2016) describes motivational CQ as the ability to show interest confidently in multicultural environments with adaptation. It is composed of extrinsic and intrinsic motivation and self-efficacy. Adomako (2011) summarize motivational CQ as the capability of individual to direct energy and attention toward cultural differences. Therefore, motivational CQ can be conceptualized as a particular form of intrinsic motivation and self-efficacy. Earley, Ang, & Tan (2006) suggest that for effective relationships to flourish and thrive there is need for high motivational CQ in culturally diversified work environment.

### **3.5.1 Motivational CQ and Decision-Making**

Goals and motives affects decisions such as manager making decision might motivate subordinates so organizational performance can be improved. In addition, motivation and decision-making varies according to culture so individual should be able to reflect values in culture. In the Western cultures, the decisions are made based on rationale so it can be for the best of the company so one should be able to do best in their jobs. (Thomas & Inkson 2017)

CQ decision-makers are aware about how different culture works so decision-making process in complex. Moreover, they are aware about their own goals and motivation while making decisions and methods of decision-making. (Thomas, & Inkson, 2003)

### **3.5.2 Motivational CQ, Effective Leadership and Innovation**

Saeidipour, Rangriz, and Torabi (2013) confirm that there is positive relationship amongst inspirational motivation and innovation. Successful leaders demonstrate with high motivational CQ and they possess they capability to direct energy and attention towards functioning and learning in culturally diversified circumstances (Ngunjiri, and Madsen, 2015).

Leaders can maximize their work system so they can access innovative intelligence through people initiatives under internal and external motivation. Therefore, it consists of systematic initiatives so culture of innovation can be built exhibiting self-sustaining. (Weiss, and Legrand, 2011; Mumford, 2003; Sauermann and Cohen, 2008) In intrinsic motivation, one of the most important is creativity

and innovation. It is reported that intrinsic motivation is promoted in transformational leadership type that is conducive to creative performance. (Shin and Zhou, 2003; Sosik, et al., 1999; Eisenberg & Cameron, 1996) In addition, innovation is only possible through intrinsic motivation (Amabile, 1988; West, 1987; Frese et al, 1999) where extrinsic motivators role is less clear (Harrison et al, 2006).

### **3.5.4 Motivational CQ and Cognitive CQ**

Various studies reported that there is link between motivational CQ, meta-cognitive CQ and cognitive CQ (Wood, & St. Peters, 2014; Solomon, & Steyn, 2017; Botvinick, & Braver, 2015). Motivational CQ and meta-cognitive leader acted as important with leadership empowerment. For directive leadership, leader's meta-cognitive, cognitive and motivational CQ played role with medium effect. (Solomon, & Steyn, 2017) Motivation influences cognition while cognition regulates motivation. On cognitive tasks, it is not necessary that individual always perform well due to lack of motivation. Cognitive executive and control function has been recognized since long due to relevancy with motivational factors. (Botvinick, & Braver, 2015)

## **3.6 Measurement of CQ**

According to Elenkov and McMahan (2005), CQS can be applied for investigating and measuring CQ in a multicultural setting. Measurement of CQ is possible with Cultural Intelligence Scale (known as CQS). It was developed for conducting interviews with global executives possessing broad experience. (Nel, et al., 2015) Ang and Van Dyne (2006) cited in Gooden, Creque, & Chin-Loy (2017) developed self-report survey with the use of CQS and consisted of Likert-Scale rating. CQS is reliable and valid for CQ measurement (Mahembe, & Engelbrecht, 2014).

## **3.7 Summary**

In Chapter 3, the analysis offers critical evaluation of applicable and existing theories and concepts of CQ (see Table 3.7.1 and 3.7.2). The components of CQ are compared and evaluated and they are metacognitive CQ, cognitive CQ, motivational CQ, and behavioral CQ. In particular, the CQ

theories and concepts are also evaluated with decision-making, effective leadership and innovation within multicultural situations and context. Accordingly, based on the reviews conducted in Chapter 2, this chapter developed the conceptual framework for this study. The focus of conceptual framework consists of CQ, components of CQ and delivering innovation in management projects.

<b>Table 3.7.1: Independent Variables, Measurement Variables and Sources</b>		
Construct (independent variables)	Measurement Variables	Sources
Cultural Intelligence (CQ)	<ul style="list-style-type: none"> <li>• Ability of individual to function in situations with effectiveness is characterized based on cultural diversity.</li> <li>• Showing differences in nationality, ethnicity and race.</li> <li>• Connects with others and they are not necessarily from his or her own culture</li> <li>• Interpret ambiguous and unfamiliar gestures of outsiders that comes naturally.</li> <li>• Motivational, emotional and cognitive capabilities to work within the environment of intercultural.</li> </ul>	Ang, & Dyne, 2015; Earley & Ang, 2003; Ang, et al., 2007; Lévy-Leboyer, 2007; Earley, and Mosakowski, 2005
Cognitive CQ	<ul style="list-style-type: none"> <li>• Cultural knowledge of practices, norms, and conventions in different cultural settings.</li> <li>• Knowledge of cultural differences and cultural universals.</li> <li>• Knowledge about how cultures are different and how cultures are similar.</li> <li>• Mental maps and knowledge structures about culture.</li> </ul>	Adomako, 2011; Clegg & Bailey, 2008

**Table 3.7.1: Independent Variables, Measurement Variables and Sources**

Construct (independent variables)	Measurement Variables	Sources
	<ul style="list-style-type: none"> <li>• Knowledge about legal and economic systems, religious beliefs, aesthetic values, norms for social interaction, and language in different cultures.</li> </ul>	
Behavioural CQ	<ul style="list-style-type: none"> <li>• Ability to act in multicultural settings with appropriateness.</li> <li>• Ability to moderate or change behavior so misunderstanding does not happen while interacting with various cultures.</li> <li>• Involves capability of an individual to exhibit proper verbal and nonverbal actions.</li> <li>• Broad range of behaviors that is important for CQ, as behavior is the most visible characteristic all through social interactions.</li> </ul>	Ngunjiri, and Madsen, 2015; Adomako, 2011; Clegg, & Bailey, 2008
Motivational CQ	<ul style="list-style-type: none"> <li>• Degree of drive and interest to adapt to new surroundings in culture.</li> <li>• Cultural experiences and interacting with other people coming from different backgrounds.</li> <li>• Self-efficacy, and individual's capability judgment accomplishments in a new culture at a certain performance level.</li> <li>• Individuals develop problem solving and strategic way of thinking to overcome challenges during intercultural encounters.</li> </ul>	Earley and Ang, 2003; Templer et al., 2006; MacNab and Worthley, 2011; Earley and Gardner, 2005; Ngunjiri, and Madsen, 2015; Zlateva, 2016; Adomako, 2011;

**Table 3.7.1: Independent Variables, Measurement Variables and Sources**

Construct (independent variables)	Measurement Variables	Sources
	<ul style="list-style-type: none"> <li>• Ability to show interest confidently in multicultural environments with adaptation.</li> <li>• Composed of extrinsic and intrinsic motivation and self-efficacy.</li> <li>• Capability of individual to direct energy and attention toward cultural differences.</li> <li>• Particular form of intrinsic motivation and self-efficacy.</li> <li>• Effective relationships to flourish and thrive there is need for high motivational CQ in culturally diversified work environment.</li> </ul>	Earley, Ang, & Tan, 2006

**Table 3.7.2: Dependent Variables, Measurement Variables and Sources**

Construct (dependent variables)	Measurement variables	Sources
Decision-Making	<ul style="list-style-type: none"> <li>• CQ were tested against cultural decision-making and cultural judgment where cognitive CQ and meta-cognitive CQ showed cultural decision-making and judgment</li> <li>• Facilitation of realistic and creative decisions during global teams collaboration.</li> </ul>	Ang, et al., 2007; Janssens & Brett, 2006; Maznevski & Di Stefano, 2000

	<ul style="list-style-type: none"> <li>• Differences in cultural background, there are differences in decision-making approach</li> </ul>	
<p>Effective Leadership and Innovation</p>	<ul style="list-style-type: none"> <li>• CQ is important for leadership effectiveness and particularly for transformational-visionary leadership.</li> <li>• Indication of complex interaction between leadership styles and cultural variables.</li> <li>• Gain suitable knowledge, motivation, behavior and strategy to function effectively in diverse cultural backgrounds with broader, open-mind, and global mindset.</li> <li>• Cross-cultural leadership capabilities are improved due to CQ capability so leaders can influence positively, as they have motivational cultural adaptation, cultural awareness and behavioral skills.</li> <li>• Leadership effectiveness can be achieved with not only cross-cultural communication but also multicultural workplaces.</li> <li>• Critical to leadership competency so managers can handle intercultural situations effectively when they have cross-border responsibilities.</li> <li>• CQ and leadership are linked as managers are able to recognize shared beliefs, attitudes and values while understanding customs, traditions and norms of a group.</li> <li>• Effective leadership need for cultural awareness within the context of diversity.</li> </ul>	<p>Elenkov &amp; McMahan, 2005; Alon &amp; Higgins, 2005; House, Javidan, Hanes, &amp; Dorfman, 2002; Ang &amp; Ng, 2005; Deng &amp; Gibson, 2008; Rockstuhl, et al., 2011; Kessler, 2013; Barak, 2005; West et al., 2003; Earley &amp; Ang, 2003; Yukl, 2006; Gölgeci, Swiatowiec-Szczepanska, &amp; Raczkowski, 2017; Winkler, &amp; Bouncken, 2011; Elenkov &amp; Manev, 2009; Groves &amp; Feyerherm, 2011; Turner, 2007; Livermore, 2011; Miller, 2016</p>

	<ul style="list-style-type: none"><li>• High CQ exhibits effectiveness in accomplishing and promoting innovations.</li><li>• CQ helps leaders to become effective leader as they grasp quickly and adapt behavior.</li><li>• Leaders with high CQ improves successful innovation with culturally suitable goals so better outcomes and objectives can be achieved.</li><li>• Leaders are able to explore diverse and new knowledge sources.</li><li>• Use of global innovation teams is necessary so sustained innovation performance can be achieved.</li><li>• Effects of communication style and cultural value differences within global innovation teams.</li><li>• Higher CQ is positive influence of leadership on organizational innovation.</li><li>• Need for organizing teams and creating structures.</li><li>• Innovation and creativity comes through learning.</li></ul>	
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# **CHAPTER 4: Research Methodology**

## **4.1 Introduction**

This chapter illustrates the research methodology that this study adopted. Research methodologies are the techniques and tools for conducting research such as any kind of investigation to uncover new or interesting facts (Walliman, 2011). First, I designed online survey questionnaire with the use of QuestionPro. During the process of survey design, I considered CQS. Then, I used statistical analysis to analyze data collected and gathered with the use of online survey questionnaire. Therefore, the purpose of this study is to investigate the impact of heterogeneous cultural intelligence on project innovation delivery in the UAE. This chapter was structured in the following style: research approach, research methodology and data collection method, and research study sampling.

## **4.2 Research Quantitative Approach**

In this study, the research approach classification consists of based on data collection or research study process developed. The main research approach in this study is quantitative approach that serves the investigative approach (Mauch, & Park, 2003). The reason I chose quantitative approach is that it provides increase in the knowledge through data gathering possibilities while allowing answering research questions and meeting research objectives (Encyclopedia of Industrial and Organizational Psychology, 2007). The process of quantitative research started with theory in Chapter 3. Therefore, from theory, I also reviewed prior research in Chapter 2 such as from conceptual and theoretical framework. It shows that quantitative research falls under empirical studies such as statistical studies. (Ridenour, & Newman, 2014)

## **4.3 Research Method and Data Type Collected**

### **4.3.1 Primary and Secondary Data**

There are two types of research methods in this research are primary and secondary methods. The primary data are gathered through original sources while secondary data is from current literature. (Bryman and Bell, 2015) The reason I chose primary data is that it offers for this study with recent data, specific sample size, and suitable for purpose of this study. In secondary data, it is cost effective and quick to access from BUID library. (Schutz, 2011) The process of research study carried out after reviewing many journals. In addition, I used in this study primary data sources so I can conduct analysis of data. The decision is also based on available primary sources and secondary sources on heterogeneous cultural intelligence and projects innovation. Even though, there are various data available, there is no specific data within the UAE industry about the nature of heterogeneous projects and cultural differences. Accordingly, there is need for the research study to source primary data from the UAE project industry.

### **4.3.2 Research Design and Data Collection**

The research design presents the plan for conducting investigation in this study (Mauch, & Park, 2003). Based on good research design, it allows to get suitable data (Toledo-Pereyra, 2012). Survey designed and developed (see Appendix A) by the use of internet tool where participants in this study can do it through the internet. Internet survey provides features and capabilities to collect data (Balch, 2010; Fink, 2013). Therefore, in this study, the survey questionnaire was designed and administered online through QuestionPro tool. The information provided in online survey, they are real-time basis and I was able to track automatically about the number of responses (Fink, 2013). QuestionPro allows to email and share survey link to all potential participants easily and affordably while saving time (Briz-Ponce, Antonio, José, 2016).

The necessary data gathered for information accumulation requires current study to use both primary and secondary methods. Accordingly, by running survey and collecting data with

managers and decision-makers from various organizations assists this study. Both the data collections will be compared to find out differences and similarities.

## **4.4 Research Sampling**

I believe that quality of a survey is depending on sampling procedures applied (Weisberg, Krosnick, and Bowen, 1996). I used convenience sampling in this study such as selecting everyone who is available to participate in online survey (Fink, 2013). Convenience sampling is one of the non-probability sampling where researcher is able to select participants based on the subject and specific criteria inclusion (Dougherty, 2010). Convenience sampling provides advantages for study such as simplest and cheapest form of sampling (Artz, 2010). The sample size determined was 33 survey participants from the UAE. I also made sure that they meet criteria for online survey such as right age, experienced in project management, and working in the UAE.

## **4.5 Cultural Intelligence Scale (CQS)**

As given in Appendix A, CQS used and applied in this study and that is considered while survey designing and development. CQS provides reported measures about intelligence such as important perspectives from participants (Sternberg, & Kaufman, 2011). In order to develop CQS, I reviewed literatures by Elenkov and McMahan (2005), Nel, et al. (2015), Gooden, Creque, & Chin-Loy (2017), and (Mahembe, & Engelbrecht, 2014). This study, adopts the methodology and scale reported in these studies. The main survey questions were given while listing questionnaire item and using 7 scale such 1=strongly disagree; 7=strongly agree. Responses consists of performance-based and Likert-type measures (Sternberg, & Kaufman, 2011).

### **4.5.1 Reliability and Validity**

Online survey enables collection of data from desired sample in a short time so it shows of being cost effective method. The questionnaire designed validated by checking for any errors or issues. (Cargan, 2007) QuestionPro online survey helps to ensure reliability and validity of survey results

showing consistent and accurate information. I chose QuestionPro online survey as it provides and serves specific purpose of this study. (Fink, 2013)

## **4.6 Summary**

In summary, Chapter 4 of this research study provides research procedure outlining research design. In addition, this study uses quantitative research approach with primary and secondary data collection methods. Finally, online survey questionnaire designed and developed to reach sample size of 30 as per convenience sampling and Cultural Intelligence Scale (CQS) applied. The results and analysis of this study are given in the subsequent chapter.

# **CHAPTER 5: Data Analysis**

This section focuses on analysis of the collected data. After data collection, I retrieved the data from online survey report (see Appendix B). The following section provides description of data analysis approaches and techniques used in this study. Firstly, I prepared the data by editing and screening. I also checked data for any errors and issues. Secondly, I performed and checked reliability of data as per CQS. Lastly, descriptive and frequency statistics were retrieved for charts and tables.

## **5.1 Introduction**

I used quantitative analysis of data in this research study. The reason I chose quantitative analysis method is because quantitative data collection method was applied. White (2002) and Oates (2006) explains that quantitative data analysis provides possibility to make data more manageable. Some of the advantages of quantitative data analysis considered in this study are data with sample size analyzed quickly, based on measured quantities, well-established techniques, and valid form of recent data.

Quantitative analysis consists of data in the form of numbers. During quantitative analysis, it is of concern to use statistics and formulas. Opportunely, it is now possible to make use of online software analysis methods to lessen manual and statistical burden that comes with errors from data entry and coding. (White, 2002) With the use of QuestionPro, the process of statistical technique for data analysis becomes easier. In this study, with the use of QuestionPro, I used descriptive statistics so I can describe and analyze results in the form of charts and tables.

## **5.2 Demographic Profile of Respondents**

This section demonstrates the data and information from descriptive data analysis of variables. In the survey, even though 66 respondents participated and filled online questionnaire, there are 32 drop-outs and 34 completed resulting in 51% completion rate (see Appendix B Figure 5.7). Table

5.1 provides gender of respondents and there are 15 males (44.12%) and 19 females (55.88%) respondents. The data indicates that majority of the respondents are more four females than males.

Table 5.1: Gender of Respondents		
Gender	%	N
Male	44.12%	15
Female	55.88%	19
Total	100.00%	34
Mean	1.56	
Confidence Interval @ 95%	[1.389 - 1.728]	
Standard Deviation	0.504	
Standard Error	0.086	

Source: Data from the Research Study (Survey)

Most of the respondents are between 25-35 years old (35.29%) and 35-45 years old (38.24%) such as 12 and 13 respondents, respectively. The remaining 3 respondents are less than 25 years old (8.82%) and 6 respondents between 45-55 years old (17.65%). The data indicates that respondents comes from different age groups.

Table 5.2: Age of Respondents		
Age	%	N
Less than 25 years old	8.82%	3
25-35 years old	35.29%	12
35-45 years old	38.24%	13
45-55 years old	17.65%	6
Total	100.00%	34
Mean	2.65	
Confidence Interval @ 95%	[2.350 - 2.944]	
Standard Deviation	0.884	
Standard Error	0.152	

Source: Data from the Research Study (Survey)

Table 5.3 illustrates living location of respondents in the UAE and majority 19 (55.88%) are in living in Abu Dhabi. There are also respondents living in Dubai (17.65% such as 6 respondents), Fujairah (14.71% such as 5 respondents), Ras Al Khaimah (5.88% such as 2 respondents), and Sharjah (5.88% such as 2 respondents). The data in Table 5.3 indicates that respondents are from various Emirates of the UAE except Ajman and Umm Al Quwain.

Table 5.3: Living Location of Respondents in the UAE		
Emirate Location	%	N
Abu Dhabi	55.88%	19
Dubai	17.65%	6
Fujairah	14.71%	5
Ras Al Khaimah	5.88%	2
Sharjah	5.88%	2
Total	100.00%	34
Mean	2.32	
Confidence Interval @ 95%	[1.764 - 2.883]	
Standard Deviation	1.665	
Standard Error	0.285	

Source: Data from the Research Study (Survey)

Respondents are living in the UAE (see Table 5.3) between 5-10 years (20.59% such as 7 respondents), 1-5 years (17.65% such as 6 respondents), 11-15 years (17.65% such as 6 respondents), more than 30 years (17.65% such as 6 respondents), 20-25 years (11.76% such as 4 respondents), 25-30 years (11.76% such as 4 respondents), and 15-20 years (2.94% such as 1 respondents).

Table 5.4: Number of Years in the UAE		
Number of Years	%	N
1-5 years	17.65%	6

5-10 years	20.59%	7
11-15 years	17.65%	6
15-20 years	2.94%	1
20-25 years	11.76%	4
25-30 years	11.76%	4
More than 30 years	17.65%	6
Total	100.00%	34
Mean	4.76	
Confidence Interval @ 95%	[4.024 - 5.505]	
Standard Deviation	2.203	
Standard Error	0.378	

Source: Data from the Research Study (Survey)

Majority of the respondents are from project management positions (see Table 5.5) and they are Project Manager (24.44% showing 11 respondents), Project Consultant (17.78% showing 8 respondents), Project End-User (15.56% showing 7 respondents), Project Director (13.33% showing 6 respondents), Project Sponsor (13.33% showing 6 respondents), and Project Board member (2.22% showing 1 respondent). While, there are little or no experience of Project Management (6.67% showing 3 respondents), and other (6.67% showing 3 respondents).

Table 5.5: Current Job Position of Respondents		
Job Position	%	N
Project Board member	2.22%	1
Project Consultant	17.78%	8
Project Director	13.33%	6
Project End-User	15.56%	7
Project Manager	24.44%	11
Project Sponsor	13.33%	6
Little or no experience of Project Management	6.67%	3

Other	6.67%	3
Total	100.00%	45
Mean	4.42	
Confidence Interval @ 95%	[3.885 - 4.960]	
Standard Deviation	1.840	
Standard Error	0.274	

Source: Data from the Research Study (Survey)

Table 5.6 illustrates number of team members. It shows that 11 respondents are working with 5-10 Team Members (32.35%), 10 respondents are working with 1-5 Team Members (29.41%), 7 respondents are working with 11-15 Team Members (20.59%), 3 respondents are working with 15-20 Team Members (8.82%) and 3 respondents are working with more than 20 Team Members (8.82%).

Table 5.6: Team Members in the Project		
Number of Team Members	%	N
1-5 Team Members	29.41%	10
5-10 Team Members	32.35%	11
11-15 Team Members	20.59%	7
15-20 Team Members	8.82%	3
More than 20 Team Members	8.82%	3
Total	100.00%	34
Mean	2.35	
Confidence Interval @ 95%	[1.932 - 2.774]	
Standard Deviation	1.252	
Standard Error	0.215	

### 5.3 Cultural Dimensions as per Effectiveness of Teamwork

The perceptions on the importance of the cultural dimensions as per effectiveness of teamwork (see Figure 5.1) showed positive strong agreement about “able to function and work with others” as per 44.12% respondents, “have differences in nationality, ethnicity and race” as per 35.29% respondents, “can connect with others from different culture” as per 41.18%. Respondents are “able to interpret ambiguous and unfamiliar gestures” as per 26.47%, “empowered while working with individuals from different nationalities” as per 24.24%, “need to be in team so I can be emotionally connected” as per 36.36%, and “can make good judgment when being part of team” as per 36.36% showing somewhat positive agreement.

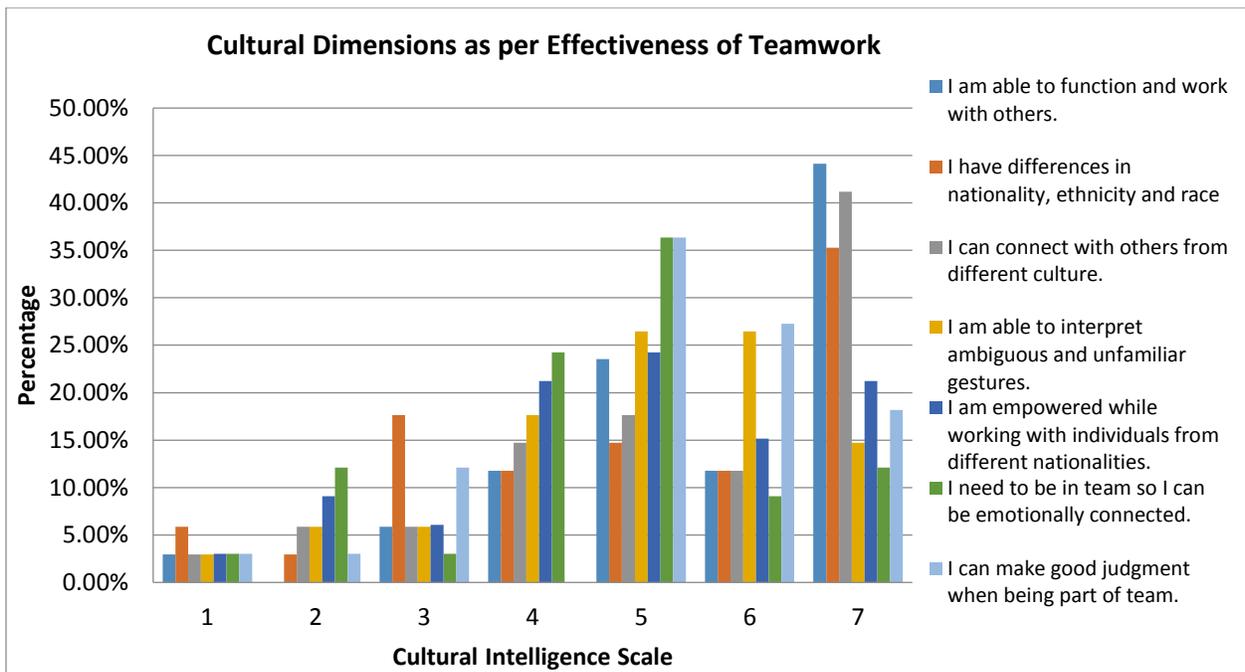


Figure 5.1: Cultural Dimensions as per Effectiveness of Teamwork

### 5.4 Main Cultural Challenges in Decision-Making

Survey respondents confirm that they do face challenges while others are neutral about it (see Figure 5.2). According to 23.53% of the respondents confirm positive agreement about “lack of embedding mechanisms in organizations” while there is also 23.53% showing neutral response.

Respondents are also neutral about “process of adjustment is at suffrage”, “increased interpersonal stresses and conflicts” such as 32.35% and 41.18%, respectively. Respondents are somewhat positive agreement at 41.18% “not easy to maintain good multicultural collaborations performance”, 32.35% “not easy for me to achieve agreement or ideas”, 35.29% “difficult to work together and solve problems”, and 47.06% “challenge to maintain cohesiveness affects group thinking”.

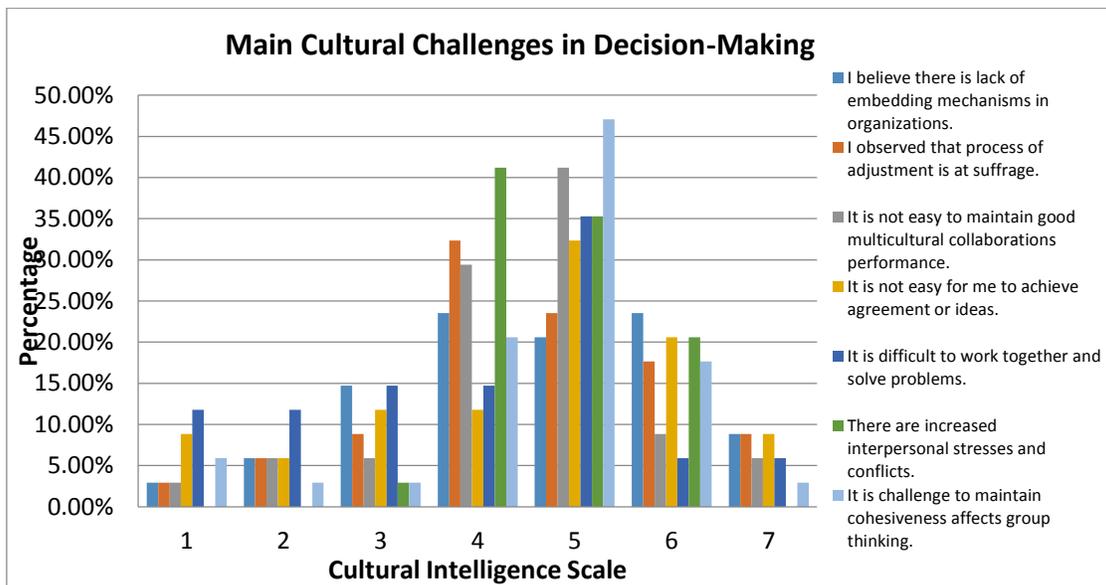


Figure 5.2: Main Cultural Challenges in Decision-Making

## 5.5 Cultural Diversity Traits Influence Effective Leadership

In cultural diversity traits influence effective leadership, the data in Figure 5.3 illustrates that majority of the respondents confirms somewhat positive agreement into this. The responses are 44.12% for “cross-cultural leadership capabilities improved”, 26.47% for “leadership effectiveness through cross-cultural communication and multicultural workplaces”, 35.29% for “leaders as they grasp quickly and adapt behavior”, 38.24% for “managers are able to recognize shared beliefs, attitudes and values while understanding customs, traditions and norms of a group”, and 44.12% for “leaders are able to explore diverse and new knowledge sources”.

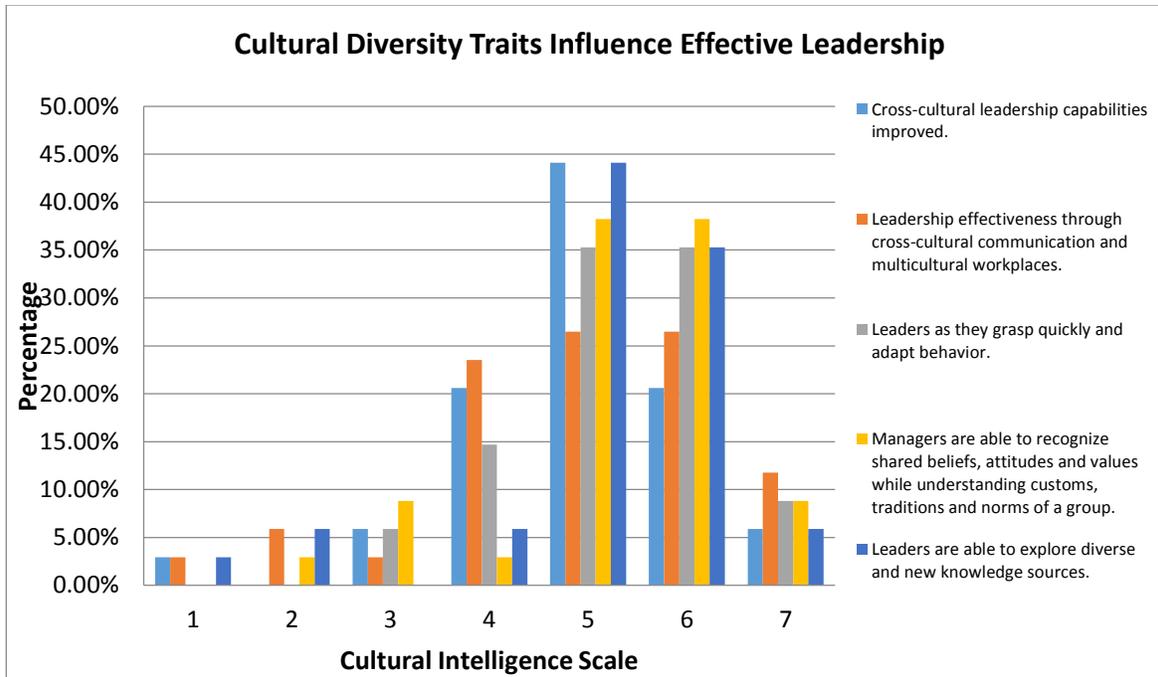


Figure 5.3: Cultural Diversity Traits Influence Effective Leadership

## 5.6 Cultural Diversity Traits Influence Innovation and Communication

In cultural diversity traits influence innovation, the data in Figure 5.4 illustrates that majority of the respondents confirms positive agreement to somewhat positive agreement. Therefore, positive agreement responses are “motivational cultural adaptation, cultural awareness and behavioral skills” at 35.29%, “effectiveness in accomplishing and promoting innovations” at 32.35%, “effects of communication style and cultural value differences within global innovation teams” at 41.18%, and “need for organizing teams and creating structures” at 33.33%. While, somewhat positive agreement are at 41.18% for “cultural awareness within the context of diversity”, and at 33.33% for “innovation and creativity comes through learning”.

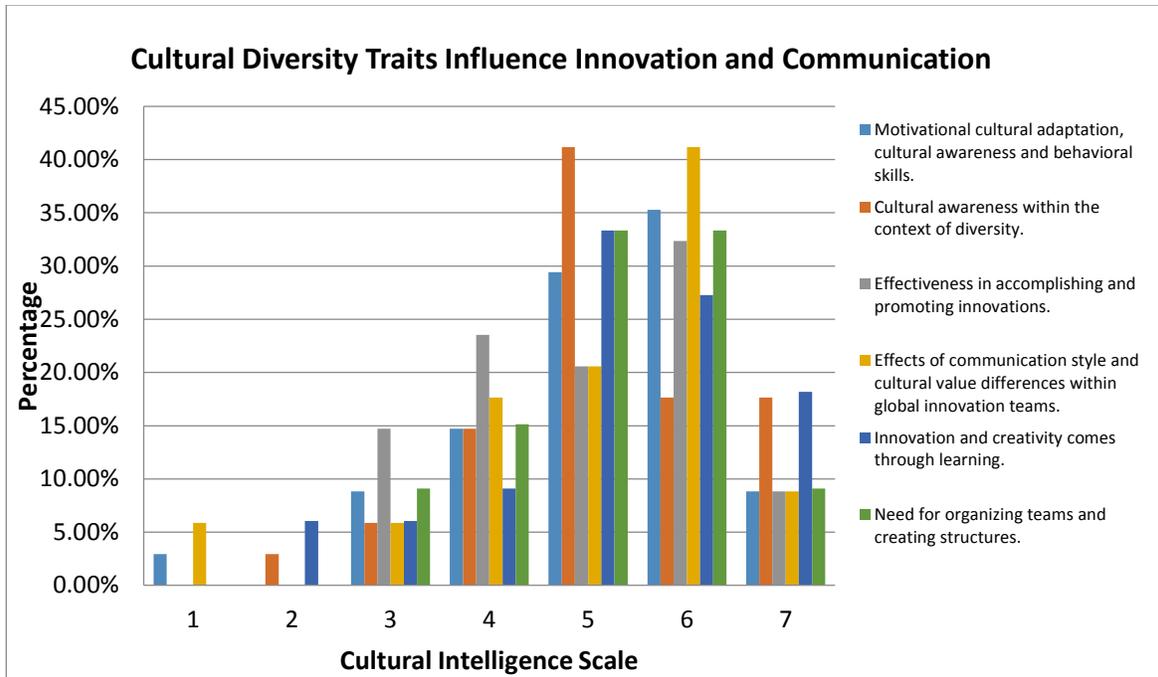


Figure 5.4: Cultural Diversity Traits Influence Innovation and Communication

## 5.7 Cultural Diversity Knowledge

As per cultural diversity knowledge (see Figure 5.5), it shows that 30.30% of the respondents “enjoys interacting with people from diverse cultures” While, there are respondents somewhat agreeing to “conscious of the cultural knowledge use when interacting with people with different cultural backgrounds”, “conscious of the cultural knowledge apply to cross-cultural interactions”, “knowledge on the cultural values and religious beliefs of other cultures”, “knowledge on the cultural values and religious beliefs of other cultures”, “knowledge on the rules for expressing non-verbal behaviors in other cultures”, “confident to socialize with locals in a culture that is unfamiliar to me”, “enjoy living in cultures that are unfamiliar to me” and “sure to deal with the stresses of adjusting to a culture that is new to me” at 32.35%, 26.47%, 42.42%, 30.30%, 36.36%, 33.33%, 36.36%, and 30.30%, respectively.

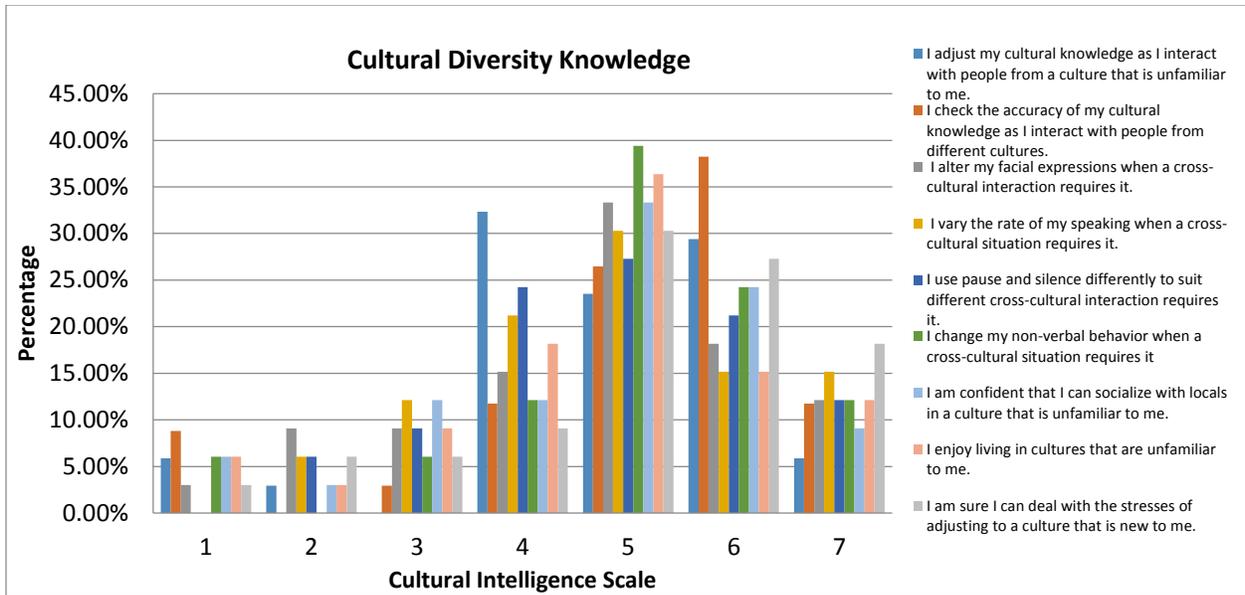


Figure 5.5: Cultural Diversity Knowledge

## 5.8 Capabilities in Cultural Diversity

Figure 5.6 shows capabilities in cultural diversity. Respondents are able to “check the accuracy of cultural knowledge such as interact with people from different cultures” and response rate is at 38.24%. There are also somewhat positive agreement about “alter facial expressions when a cross-cultural interaction requires”, “vary the rate of speaking when a cross-cultural situation requires”, “use pause and silence differently to suit different cross-cultural interaction requires”, and “change non-verbal behavior when a cross-cultural situation requires” and the response rate are 33.33%, 30.30%, 27.27%, and 39.39%, respectively. However, respondents are neutral about “adjust cultural knowledge as interact with people from a culture that is unfamiliar” at response rate 32.35%.

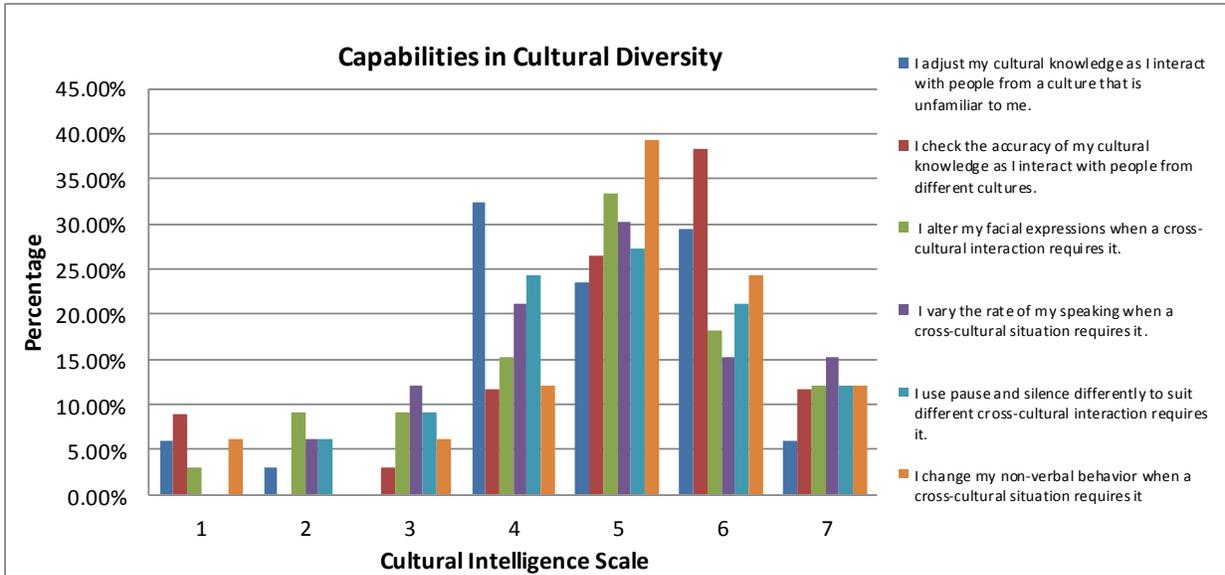


Figure 5.6: Capabilities in Cultural Diversity

## 5.9 Summary

Data analysis method used in this study is quantitative method with descriptive statistics. The outcomes of data analysis shows that majority of the respondents are females (44.12%), 35-45 years old (38.24%), 55.88% are in living in Abu Dhabi, 20.59% living in the UAE between 5-10 years, 24.44% in project managerial positions with 32.35% working with 5-10 team members. The data results also showed that respondents' perceptions on cultural dimensions importance based on teamwork effectiveness showed positive agreement. In addition, respondents also face challenges such as collaboration, working together, problem solving and cohesiveness.

The impacts on effective leadership from cultural diversity are improvement in leadership capabilities, adaptation in behavior, recognition of shared values, beliefs and attitudes, exploration of new knowledge and diverse sources, communication and workplaces effectiveness due to cross-cultural diversity. The data results also showed positive influence on innovation such as cultural adaptation, cultural behavioral and awareness skills, promoting and accomplishing innovations, cultural value differences and communication style, creating structures and organizing teams, learning creativity and innovation.

Cultural diversity knowledge also showed positive results where there are interactions with people, awareness about religious beliefs, and values, socialize with locals, living in unfamiliar cultures, and positive adjustment in different cultures. Respondents also showed that they have capabilities in cultural diversity. They are able to check cultural knowledge accuracy, alter facial expressions, rate of speaking changes, use silence and pause differently, and changes in non-verbal behavior.

# **CHAPTER 6: Findings Discussion**

## **6.0 Introduction**

In the following sections, the respective results and findings will be discussed along with empirical and theoretical analyses contributions. In this study, I aim to answer the research questions: What are important cultural dimensions in effectiveness of teamwork?, Which are the main cultural challenges in decision-making?, Which cultural diversity traits influence innovation and effective leadership? and What are your capabilities measurements? The overall purpose of this study was to investigate about innovation delivery in project management and the impact of heterogeneous cultural intelligence within this context in the UAE.

## **6.1 Discussion of Findings**

### **6.1.1 Cultural Dimensions and Teamwork**

Hofstede (1994) argues that there are differences in culture at national level, as per Hofstede theory of cultural dimensions. According to findings in literature, individuals are able to function in cultural diversity due to CQ and consist of differences in race, nationality and ethnicity. In addition, individuals can connect with others while they are not from same culture but different. (Ang, & Dyne, 2015; Earley & Ang, 2003; Ang, et al., 2007; Lévy-Leboyer, 2007; Earley, and Mosakowski, 2005) Similarly, the findings in this study also showed that majority of the individuals are able to function with others (44.12%) and they do have differences in ethnicity, race and nationality (35.29%). There were also few of them agreeing on the ability to interpret unfamiliar and ambiguous gestures (26.47%) with empowerment to work with others from different cultures (24.24%). While, there are few individuals able to connect others emotionally (36.36%) with the ability to make good judgment (36.36%). The findings from literature and survey show similarities and agreements on teamwork and cultural dimensions.

## **6.1.2 Main Cultural Challenges in Decision-Making**

Ang, et al. (2007), Janssens & Brett (2006) and Maznevski & Di Stefano (2000) finds that due to differences in cultural background, there are also differences in approach for decision-making. The process of decision-making helps in the facilitation of creative and realistic decisions during teams collaboration across the globe. Similarly, these findings were made based on testing cultural judgment and cultural decision-making with emphasis on meta-cognitive CQ and cognitive CQ. According to Schuler (1980), there is influence from organizational aspects and practitioners on decision-making effectiveness in-group. Koskinen et al. (2003) finds that there is impact of implicit knowledge on group decision-making and the influence is as per professional ability Cheng et al. (2005) and Hodgson (2002). Earley and Ang (2003) describes that decision-making in the right setting and right time happens for various reasons such as analogical and inductive reasoning. The findings in this study also showed that they are facing some of the challenges at varying level. Majority of them finds it challenging to maintain good performance (41.18%). They are also facing challenges in coming into ideas and agreement (32.35%) while trying to work together and solve problems (35.29%). Moreover, the findings also showed that it is quite challenging to preserve cohesiveness and there are effects on group-thinking (47.06%). The findings from literature and survey show similarities and agreements on various challenges faced during decision-making.

## **6.1.3 Cultural Diversity Traits Influence Effective Leadership/Innovation**

Gotsis, & Grimani (2016) finds that leadership is important and particularly diverse leaders so people from different culture can interact and work together. Witkemper (2012) explained that diversified leadership styles enables better performance in diversified teams. In findings from literature, it shows CQ is important so effectiveness of leadership can be maintained with difficult relations among cultural variables and leadership styles. With leadership capabilities, it becomes possible to improve CQ capability within cross-cultural communication and adaptation. Another finding showed that due to high CQ, it becomes possible to promote and accomplish innovation. Therefore, innovation can be improved as per success in high CQ for achievement of objectives.

In addition, it is possible for leaders to gain knowledge sources and explore diversity. The achievement of organizational innovation becomes possible through higher CQ from leaders with the need to create structures and organize teams as per learning made. (Elenkov & McMahan, 2005; Alon & Higgins, 2005; House, Javidan, Hanes, & Dorfman, 2002; Ang & Ng, 2005; Deng & Gibson, 2008; Rockstuhl, et al., 2011; Kessler, 2013; Barak, 2005; West et al., 2003; Earley & Ang, 2003; Yukl, 2006; Gölgeci, Swiatowiec-Szczepanska, & Raczkowski, 2017; Winkler, & Bouncken, 2011; Elenkov & Manev, 2009; Groves & Feyerherm, 2011; Turner, 2007; Livermore, 2011; Miller, 2016) Accordingly, this study findings also showed that cultural diversity traits does influence effective leadership and innovation. Leadership capabilities can be improved (44.12%) through multicultural workplaces and cross-cultural communication (26.47%). These diverse leaders are able to adapt behavior and grasp quickly (26.47%) because they have the recognition of shared attitudes, beliefs and values (35.29%) with the understanding of norms, customs and traditions of a group (38.24%). The findings from literature and survey show similarities and agreements influencing effective leadership.

The findings by Winkler, & Bouncken, (2011) state that global innovation teams applied for innovation performance sustainability. Hence, the performance of team and innovation shows effects from cultural diversity. Here, leadership comes into role in facilitation of innovation across various stages and levels of creativity. Rossberger, & Krause (2015) also reports that there is no specific relationship between national innovation and leadership style but between educational level and leadership style. Somech (2006) also presented that leadership style does have relationship with processes and outcomes from heterogeneous team. It shows that various findings also made about relationship between leadership style adopted and success in team performance and innovation (Schippers, et al., 2008; Charbonnier-Voirin, et al., 2010; Homan, & Greer, 2013). Covert behaviors consists of invisible behavior aspects while overt behaviors consists of communication and languages (Van Dyne et al., 2012). Macnab et al. (2012) finds that CQ behavior consists of intentional-observable behaviors in various heterogeneous cultural environments. Earley and Ang (2003) also finds that behavior consists of both verbal and non-verbal and contains little on observable or overt behaviors. CQ behaviors includes CQ components and they are cognitive, metacognitive, and motivational. Accordingly, these behaviors requires planning, decision-making, self-presentation demonstration and motivational-oriented. The

findings from this study also showed similarities innovation being influenced by cultural diversity traits. Respondents are certain about motivational cultural awareness and cultural adaptation (35.29%). In addition, they are able to promote and accomplish innovations (32.35%) but there are effects of cultural value and communication style differences (41.18%). Furthermore, there is need for creating structures and organizing teams (33.33%) so cultural awareness (41.18%) can be created for creativity and innovation (33.33%). The findings from literature and survey show similarities and agreements influencing communication and innovation.

#### **6.1.4 Cultural Diversity Knowledge**

Culture diversity consists of defined culture with differences of ideas and means based on interaction among people while they expand their knowledge so they can reflect experience and put action. (Geertz, 1973) Individuals try to incorporate and mirror new knowledge with mental processing at high level (Earley and Ang, 2003). Therefore, cultural knowledge can be understood as per metacognitive CQ through higher mental process (Lin et al., 2012). Cognitive phenomena are related to metacognition that consists of both knowledge and cognition such as thinking about thinking itself (Earley and Ang, 2003). Clegg & Bailey (2008) and Adomako (2011) finds that knowledge consist of economic and legal systems, aesthetic values, religious beliefs, cultural differences and similarities, language and norms for social interaction in different cultures in cognitive CQ. Various literature findings from Earley and Ang (2003), Templer et al. (2006), MacNab and Worthley (2011), Earley and Gardner (2005), Ngunjiri, and Madsen (2015), Zlateva (2016), Adomako (2011), and Earley, Ang, & Tan (2006) also shows extrinsic and intrinsic motivational CQ as degree of interest and drive to adapt to new surroundings, interaction with others, self-efficacy, strategic way of problem solving, confidence in multicultural environments, and direct attention and energy. The findings from survey shows 30.30% of individuals enjoy interaction with others from different culture while 32.35% also confirms that conscious of cultural knowledge is required for application to cross-cultural interactions, as per 26.47%. The findings also showed about knowledge on religious beliefs, and cultural values (42.42%), non-verbal behavioral rules (30.30%), socialize with locals (36.36%), living in unfamiliar cultures (33.33%), and adjusting and dealing with stress of other cultures (30.30%). The findings from literature and

survey show somewhat similarities and agreements on cultural diversity knowledge. It indicates there is need for more awareness on cultural diversity knowledge.

### **6.1.5 Capabilities in Cultural Diversity**

In literature findings, behavioral CQ is the ability to change behavior, act in multicultural settings, exhibit proper actions, and visible characteristics and all these with appropriateness, within social interactions and within various cultures. (Ngunjiri, and Madsen, 2015; Adomako, 2011; Clegg, & Bailey, 2008) Individuals (38.24%) possess the capability to check cultural knowledge accuracy and it is to interact with others from different cultures. In addition, individuals can also alter facial expressions with various rate of speaking during cross-cultural situations (33.33%, and 30.30%). Additionally, individuals can also use silence, pause during various interactions (27.27%), and make changes in non-verbal behavior (39.39%). The survey findings also show similarities with individual capabilities in cultural diversity as measurement made when comparing with literature findings.

# **CHAPTER 7: Conclusion**

## **7.0 Introduction**

Chapter 7 begins with summary of findings made in this study. This study made theoretical contributions same as outlined with managerial implications that should be considered. In addition, this study is limited due to various limitations found and recommendations made for future studies.

## **7.1 Findings Summary**

The findings from literature are aligned with findings from this study. Different literatures such as Hofstede (1994), Ang, & Dyne (2015), Earley & Ang (2003), Ang, et al. (2007), Lévy-Leboyer (2007), and Earley, and Mosakowski (2005) showed that there are cultural differences and there are effects on teamwork due to differences among individuals from different race, nationality and ethnicity. The important areas for effective teamwork are ability to function, connection, and good judgment while working with others shows high scores such as 5.65, 5.38, 5.18, and 5.03, respectively. While, there are some considerations for having differences, interpretation, empowerment, and being part of team such as 4.97, 4.85, and 4.55, respectively. It shows that positive findings made in terms of teamwork within heterogeneous teams in projects.

Decision-making within the context of heterogeneous team is never easy. Due to cultural diversity, it becomes difficult to make decisions due to presence of challenges. In many researches, there are findings that different approaches exist in decision-making because of differences in cultural background. During team collaborations, the process of decision-making helps for realistic and creative decisions with emphasis on cognition and meta-cognitive CQ. (Ang, et al., 2007; Janssens & Brett, 2006; Maznevski & Di Stefano, 2000; Schuler, 1980; Koskinen et al., 2003; Cheng et al., 2005; Hodgson, 2002; Earley and Ang, 2003). Some of the challenges are conflicts, stresses, weak cohesiveness, poor mechanisms, disagreements and difficulties in working together and their

scores are 4.74, 4.65, 4.59, 4.56, 4.50, 4.50, and 3.91, respectively, the lowest scoring shows less challenges.

Cultural diversity traits influence effective leadership and innovation. The effectiveness is triggered while working together because of high CQ level among leaders. With diversified leadership styles it is possible to work and lead diversified teams showing better and improved performance. (Gotsis, & Grimani, 2016; Elenkov & McMahan, 2005; Alon & Higgins, 2005; House, Javidan, Hanes, & Dorfman, 2002; Ang & Ng, 2005; Deng & Gibson, 2008; Rockstuhl, et al., 2011; Kessler, 2013; Barak, 2005; West et al., 2003; Earley & Ang, 2003; Yukl, 2006; Gölgeci, Swiatowiec-Szczepanska, & Raczkowski, 2017; Winkler, & Bouncken, 2011; Elenkov & Manev, 2009; Groves & Feyerherm, 2011; Turner, 2007; Livermore, 2011; Miller, 2016) The influential areas are managerial recognition on differences of shared beliefs, quick adaptation, learning creativity and innovation, cultural awareness, organizing teams, exploring new knowledge, motivation adaptation, cultural value and communication style. The scores of these areas are 5.26, 5.26, 5.24, 5.18, 5.18, 5.12, 5.09, and 5.06, respectively. There is also consideration for other influential areas such as innovation effectiveness, leadership effectiveness, and cross-cultural capabilities and the scores are 4.97, 4.91, and 4.88, respectively. The indications from these findings are cultural diversity showing effects on innovation and leadership effectiveness but high CQ levels in minimizing such effects.

Cultural diversity requires individuals to have capabilities. The capabilities consist of mental processing, knowledge and cognition. During social interactions, such individuals should be able to gain knowledge and apply them showing thinking about their thoughts on various differences among different cultures. The findings also showed extrinsic and intrinsic motivational CQ as a part of capabilities in individuals. (Geertz, 1973; Earley and Ang, 2003; Clegg & Bailey, 2008; Adomako, 2011) The data results showed high scores for capabilities to interact, deal, consciousness, accuracy, and make changes while working within heterogeneous team and the scores were 5.12, 5.12, 5.09, 5.09, 5, and 5, respectively. The low considerations with acceptable capabilities measurements showed changes in the use of silence, rate of speaking, knowledge on cultural values and adjustments, confidence level, living in different cultures, facial expressions, and legal and economic system adaptation. The scores of these capabilities were 4.85, 4.82, 4.73,

4.70, 4.70, 4.67 and 4.55, respectively. It indicates that individuals face some challenges in their capabilities to deal with heterogeneous project team but they are doing well.

## **7.2 Theoretical Contributions**

The study contributes with theoretical contributions to the literature of CQ, and project management with innovation. Accordingly, the findings in this study confirm the positive impact of cultural diversity on delivery of innovation during project management. Similarly, the findings from this study and in many researches show consistency (Hofstede, 1994; Ang, & Dyne, 2015; Koskinen et al., 2003; Earley and Ang, 2003; Gotsis, & Grimani, 2016; Geertz, 1973). Therefore, this study contributes in the performance of heterogeneous teamwork within the level of diversity in the UAE. The performance between CQ and project management is at both group and organization level. The results from this study indicate positive agreement and similarities between literature and survey findings. It shows that this thesis delivers more insight into CQ and cultural diversity importance during project management with innovation. Lastly, it is one of the unique and first studies to investigate the impact of heterogeneous CQ in the UAE while delivery project management innovation. It is also found that there is demand of research studies on CQ and cultural diversity about the UAE. Accordingly, it reveals that the empirical findings made in this study provide background and support for future research studies.

## **7.3 Managerial Implications**

There are useful implications for heterogeneous project managers and teams to reduce negative impact of CQ practically while delivery innovative projects in the UAE. In addition, project management corporations and businesses entering the UAE market can also benefit from this study. Generally, this study suggests some of the managerial propositions as per research findings background:

- During team formation, it is necessary that managers do select team members with similar cultural background so effective teamwork can be activated. Accordingly, the team performance will be better and efficient within heterogeneous project tasks and activities.

- Team leaders and managers assigned should be with high CQ level so they can help team to increase performance and trigger innovative projects. It will help in minimizing challenges faced by project leaders and managers about decision-making due to team diversity during problems, stress, conflicts, and disagreements.
- There is need to consider cultural diversity influence on innovation, communication and effective leadership. It indicates that consideration should be given for heterogeneous team, organizational culture and identity. Many project managers should provide ways and tools for innovation, and communication to ensure collaboration, creativity and learning.
- Cultural training and knowledge sharing is also vital for each of the employee so all project team members get the opportunity to enhance team collaboration. The focus of cultural training should be on motivational, behavioral, and cognitive CQ so cross-cultural behavior related working knowledge could be developed.

## **7.4 Study Limitations & Future Research Recommendations**

The findings in this study contribute to current studies on CQ, innovative project management, and impact from heterogeneous project team but there are always areas for improvements to make. Therefore, there are limitations in this research study and they are data collection method, and sample size. Due to short time and limited resources, this study collected data using survey questionnaire. Therefore, it will be sufficient to conduct future study with qualitative research methods to get in-depth information and data. The use of diversified methods with combination of qualitative and quantitative methods helps in the development of rich insights and better understood (Venkatesh, Brown, & Bala, 2013; Creswell, 2014). The sample size chosen is also small and it was not easy to access large sample size. The higher the sample size in future studies will lead to better information and data gather and generalization of the results with better validity and reliability of findings. The participants in this study are mainly from the UAE. It is suggested that participants from neighboring countries should be welcomed so data results and findings can be stronger.

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# Appendix

## Online Survey Questionnaire

<http://www.questionpro.com/t/ANcJIZaq9d>

Respected Madam/Sir,

I would like to invite you to participate in this study and the topic is “Delivering Innovation in Managing Projects: An Investigation on the Impact of Heterogeneous Cultural Intelligence in the UAE”. In this study, all participation are for academic study purpose and all data participation in this online survey will be kept confidential and reported aggregate. Your participation is highly important and valuable for this research study so please participate in this study.

Thank you for your time.

Please click below “Next” so you can start your participation with online survey.

### Section A: Demographic Questions

1) What is your gender?

- Male
- Female

2) What is your age?

- Less than 25 years old
- 25-35 years old
- 35-45 years old
- 45-55 years old
- More than 55 years old

3) Where do you live in the UAE?

- Abu Dhabi
- Ajman
- Dubai
- Fujairah
- Ras Al Khaimah
- Sharjah
- Umm Al Quwain

4) How many years are you in the UAE?

- Less than 1 year
- 1-5 years
- 5-10 years
- 11-15 years
- 15-20 years
- 20-25 years
- 25-30 years
- More than 30 years

5) What is your current job position?

- Project Board member
- Project Consultant
- Project Director
- Project End-User
- Project Manager
- Project Sponsor
- Little or no experience of Project Management
- Other \_\_\_\_\_

6) How many team members are there in the project?

- 1-5
- 5-10
- 11-15
- 15-20
- More than 20

**Section B: Workforce Diversity, and Project Innovation**

Please rate the following questions based on your best answer that describes from 1=strongly disagree to 7=strongly agree.

7) The importance of the following cultural dimensions as per effectiveness of teamwork.	1	2	3	4	5	6	7
I am able to function and work with others.	<input type="checkbox"/>						
I have differences in nationality, ethnicity and race	<input type="checkbox"/>						
I can connect with others from different culture.	<input type="checkbox"/>						
I am able to interpret ambiguous and unfamiliar gestures.	<input type="checkbox"/>						
I am empowered while working with individuals from different nationalities.	<input type="checkbox"/>						
I need to be in team so I can be emotionally connected.	<input type="checkbox"/>						

I can make good judgment when being part of team.	<input type="checkbox"/>						
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8) The main cultural challenges in decision-making.	1	2	3	4	5	6	7
I believe there is lack of embedding mechanisms in organizations.	<input type="checkbox"/>						
I observed that process of adjustment is at suffrage.	<input type="checkbox"/>						
It is not easy to maintain good multicultural collaborations performance.	<input type="checkbox"/>						
It is not easy for me to achieve agreement or ideas.	<input type="checkbox"/>						
It is difficult to work together and solve problems.	<input type="checkbox"/>						
There are increased interpersonal stresses and conflicts.	<input type="checkbox"/>						
It is challenge to maintain cohesiveness affects group thinking.	<input type="checkbox"/>						

9) Which of the following cultural diversity traits influence innovation and effective leadership?	1	2	3	4	5	6	7
Cross-cultural leadership capabilities improved.	<input type="checkbox"/>						
Motivational cultural adaptation, cultural awareness and behavioral skills.	<input type="checkbox"/>						
Leadership effectiveness through	<input type="checkbox"/>						

9) Which of the following cultural diversity traits influence innovation and effective leadership?	1	2	3	4	5	6	7
cross-cultural communication and multicultural workplaces.							
Managers are able to recognize shared beliefs, attitudes and values while understanding customs, traditions and norms of a group.	<input type="checkbox"/>						
Cultural awareness within the context of diversity.	<input type="checkbox"/>						
Effectiveness in accomplishing and promoting innovations.	<input type="checkbox"/>						
Leaders as they grasp quickly and adapt behavior.	<input type="checkbox"/>						
Leaders are able to explore diverse and new knowledge sources.	<input type="checkbox"/>						
Effects of communication style and cultural value differences within global innovation teams.	<input type="checkbox"/>						
Need for organizing teams and creating structures.	<input type="checkbox"/>						
Innovation and creativity comes through learning.	<input type="checkbox"/>						

10) The following statement that best describes you.	1	2	3	4	5	6	7
I am conscious of the cultural knowledge I use when interacting with people with different cultural	<input type="checkbox"/>						

10) The following statement that best describes you.	1	2	3	4	5	6	7
backgrounds.							
I adjust my cultural knowledge as I interact with people from a culture that is unfamiliar to me.	<input type="checkbox"/>						
I am conscious of the cultural knowledge I apply to cross-cultural interactions.	<input type="checkbox"/>						
I check the accuracy of my cultural knowledge as I interact with people from different cultures.	<input type="checkbox"/>						
I know the legal and economic systems of other cultures.	<input type="checkbox"/>						
I know the cultural values and religious beliefs of other cultures.	<input type="checkbox"/>						
I know the rules for expressing non-verbal behaviors in other cultures.	<input type="checkbox"/>						
I enjoy interacting with people from different cultures.	<input type="checkbox"/>						
I am confident that I can socialize with locals in a culture that is unfamiliar to me.	<input type="checkbox"/>						
I am sure I can deal with the stresses of adjusting to a culture that is new to me.	<input type="checkbox"/>						
I enjoy living in cultures that are unfamiliar to me.	<input type="checkbox"/>						
I use pause and silence differently to suit different cross-cultural	<input type="checkbox"/>						

10) The following statement that best describes you.	1	2	3	4	5	6	7
interaction requires it.							
I vary the rate of my speaking when a cross-cultural situation requires it.	<input type="checkbox"/>						
I change my non-verbal behavior when a cross-cultural situation requires it	<input type="checkbox"/>						
I alter my facial expressions when a cross-cultural interaction requires it.	<input type="checkbox"/>						

Thank you for your participation!