

# **The Influence of National Culture on Knowledge Sharing**

**تأثير الثقافة الوطنية على تبادل المعرفة**

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# **The Influence of National Culture on Knowledge Sharing**

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# Abstract

This dissertation examines the influence of National Culture (NC) on Knowledge Sharing (KS) within the context of global projects in the banking industry. A structured online survey method was utilized to investigate NC and NS. The NC section includes Time, Context, Power Distance, Gender Egalitarianism, Humane Orientation, Uncertainty Avoidance and Individualism-Collectivism. For NS seven dimensions are examined including Intention, Subjective Norms, Extrinsic Motivation, Knowledge Ownership, Social Network, Mode of Communication and Perceived the Usefulness of the Technology.

The sample for this dissertation includes four nationalities namely: Arab, Indian, Pakistani and Philipino. Pearson chi-square and Kruskal-Wallis Tests are employed to investigate the differences in KS ratings. Relationships between KS variables and NC variables are inspected using Spearman's rho correlations. Extrinsic Motivation and Knowledge Ownership rated higher in the Arab sample in comparison to Indian, Pakistani and Philipino. Principal Component Factor Analysis found that the seven KS variables loaded onto three factors namely: “KS factors”, “Knowledge Ownership and Communication” and “Extrinsic Motivation”. In addition, logistic regressions yielded interesting results such as Context and Power Distance are significant predictors of Knowledge Ownership. Context also is found to be a significant predictor for Extrinsic Motivation. Nevertheless, further research is recommended to study other NC variables such as language and ethnicity and KS factors that this dissertation did not address, including trust, anticipated reciprocal relationships and organizational culture. Both theoretical and practical recommendations are presented to minimize cultural differences in global projects environment and to enhance knowledge sharing practices.

**Keywords: Global projects, National, Culture, Knowledge, Sharing, Management, Arab, Indian, Pakistani and Philipino.**

## ملخص

تتناول هذه الأطروحة تأثير الثقافة الوطنية على تبادل المعرفة في سياق المشاريع العالمية في الصناعة المصرفية. ولدراسة هذه الظاهرة فقد تم استخدام استطلاع الرأي على الانترنت. وينقسم هذا الاستطلاع إلى قسمين رئيسيين بالإضافة إلى الاسئلة المتعلقة بالمسح السكاني.

القسم الأول ، ويتناول قسم الثقافة الوطنية الذي يشمل : الوقت، السياق، السلطة عن بعد، مذهب المساواة بين الجنسين، إنسانية التوجه، تجنب عدم اليقين، والجماعية- الفردية.

أما القسم الثاني الذي يشمل جزئية تبادل المعرفة، فقد تمت دراسة سبعة أبعاد تتضمن ما يلي : النية، المعايير الذاتية، دافع خارجي، ملكية المعرفة، الشبكة الإجتماعية، نمط الإتصال ومدى الإدراك بفوائد التكنولوجيا.

وتشمل العينة المستطلعة أربع اجناس هي : العربية، الهندية، الباكستانية، والفلبينية. وقد استخدمت اختبارات متعددة مثل بيرسون في مربع ، وكروشال- واليس ، لغرض التعرف على فرق الاختلافات في تبادل المعرفة. وقد تم فحص العلاقات بين المتغيرات باستخدام معيار سبيرمان . أما الدافع الخارجي و ملكية المعرفة فقدّرت أعلى نسبياً في عينة المستطلعين العرب بالمقارنة مع المستطلعين الهنود والباكستانيين والفلبينيين.

وقد توصل تحليل عامل المكون الرئيسي إلى أن سبعة من متغيرات تبادل المعرفة تم تحميلها على ثلاثة عوامل وهي : "عوامل تبادل المعرفة"، " ملكية المعرفة والإتصال"، و"الدافع الخارجي". بالإضافة إلى ذلك ، فقد تم استخدام فحص التراجع اللوجستي ، والذي بدوره أسفر عن نتائج مثيرة للإهتمام مثل : "السياق وقوة البعد تشكل مؤثرات هامة لملكية المعرفة" ؛ السياق أيضاً وجد أنه يكون مؤثراً هاماً لتحفيز العامل الخارجي. ومع ذلك، فمن المستحسن إجراء مزيد من البحوث لدراسة متغيرات الثقافة الوطنية مثل : اللغة ، العرق وعوامل تبادل المعرفة التي لم تعالج في هذه الأطروحة، بما في ذلك الثقة والعلاقات المتبادلة المتوقعة والثقافة التنظيمية. وتعرض كل من التوصيات النظرية والعملية للتقليل من إختلافات الثقافة في بيئة المشاريع العالمية وتعزيز ممارسات تبادل المعرفة.

**الكلمات المفتاحية:** المشاريع العالمية، الوطنية، الثقافة، المعرفة، تبادل، إدارة، العرب، الهنود، الباكستانيين و الفلبينيين.

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# Abbreviations

Customer Relationship Management (CRM)

Knowledge Sharing (KS)

National Culture (NC)

Net Promoter Score (NPS)

Principal Components Analysis (PCA)

The Theory of Planned Behavior (TPB)

United Arab Emirates (UAE)

United States (US)

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# Introduction

In the contemporary knowledge intensive economy, organizations with global exposure are forced to run projects across the world—global projects—in which the team members have diverse cultures, languages and working in geographical dispersion. Global projects are often complex since they are characterised by macro challenges such as social, economic, cultural, environmental and political factors and micro challenges such as leadership, communication, planning, information technology (IT) tools, and knowledge sharing variables.

Research shows that project management (PM) is an essential part of dealing with global project challenges (Vittal and Michael, 2010). This dissertation focuses on the influence of national culture (NC) on knowledge sharing (KS) within the context of global projects in the banking industry. In this section, an overview of trends in project management is presented and discussed. The concept of a project's successes and failures is outlined. In addition, the limitations of project management approaches are assessed. Finally, the dissertation's problem statement, research questions and objectives are given.

## 1.1 Background

From the extant management literature it is apparent that the management of the projects is important. The Great Wall of China, Roman Aqueducts and Egyptian Pyramids are a few examples that represent the long history of how projects have been managed (Carmichael, 2003; Shenhar and Dvir, 2007). Before the 1950s, however, projects were managed on a somewhat ad-hoc basis. Since then, project management has evolved as a separate discipline during the modern era (Morris et al., 2006).

Practitioners and academics have different definitions and interpretations of the subject of project management, such as technique collection (Reiss, 1995), discipline (Gardiner 2005; Shenhar and Dvir, 2007), management behavior (Kwak and Anbari,

2009) and management form or process (Srivannaboon and Milosevic, 2006). The main objective of project management is ensuring successful completion of the project which has been found as theme common to all definitions of project management.

Project management has evolved and changed over time. Kloppenborg and Opfer (2002) carried out a detailed review of the management research from the 1960 until 1999. In the 1960s, project management research was focused on planning and scheduling aspects. In the 1970s research interest shifted to cost and schedule control. In the 1980s, other aspects such as the project's life cycle and risk management planning were added to the 1970s core areas of focus. In addition, during this time a major trend emerged categorized by including the human elements in projects such as team building and leadership. These human elements continued to appear and develop in more depth in project management research during the 1990s. A major shift in project management research has developed in the 2000s. For example, more researchers have studied project typologies (Evaristo and Fenema, 1999; Katzy et al., 2000; Tumer and Muller, 2003). Others have investigated how to manage multiple projects, particularly through portfolio management (Cooper et al., 2001; Killen et al., 2008; Levine, 2005). Recently, other researchers have focused on the globalization of projects (Armstrong, 2000; Binder, 2007; Chen et al., 2006; Vittal and Michael, 2010). In addition, project management research interests have shifted to cross-disciplinary studies between project management and allied disciplines such as Psychology and Politics (Kwak and Anbari, 2009). For example, Caughron and Mumford (2008) aimed to combine psychological and project management research by emphasising the role of cognitive behaviour in the process of planning. Shenhar and Dvir (2007) have suggested that project management will change in the coming few years and will evolve into three major perspectives, namely: 1) The strategic/business view, 2) the operational/process view, and 3) the team/leadership view.

There are two dominant sources of project management professional knowledge. First is the Guide to the Project Management Body of Knowledge (PMBOK® Guide) which was published by the professional institute called the American Project



Management Institute (PMI), initially in the 1970s. Second is the Association for Project Management (APM), a British professional project management institute, which first published a Body of Knowledge in the 1990s. There are some differences between the APM's and PMI's approaches and methodologies. The PMI focuses more on tools and techniques on how to manage projects, whereas the APM concentrates more directly on general knowledge that may be applied in all projects. In addition, the APM guide contains 200 pages, in contrast, the PMI publication has close to 400 pages (Morris et al., 2006). Eberlein (2008) argues that a clear distinction between the two professional institutes is the different national cultures and subject coverage. In PMI, NC is considered as part of a social factor, whilst in APM, the NC is highlighted in working on projects with teams from different cultural backgrounds.

Turner (1992:11, cited in Eberlein, 2008: p.29) defines a project as “an endeavour in which human, material and financial resources are organized in a novel way, to undertake a unique scope of work, of given specification, within constraints of cost and time, so as to achieve beneficial change defined by quantitative and qualitative objectives”. As was mentioned, previously the ultimate goal of the project management is to ensure the successful completion of the project. A review of the literature reveals that the notion of project success continues to be subjective (Altmann, 2005; Baccarini 1999; Pinto and Slevin, 1988, 1989). There is no agreement yet about what constitute the ultimate success factors of any project (Baccarini, 1999; Cicmil, 1997; Freeman and Beale, 1992; Pinto and Slevin, 1988). Nevertheless, there are a number of indicators to measure the project's success or failure.

Dong et al., (2004) carried out a study in Chinese information systems to identify what factors determine a project's success. Several critical success factors have been identified namely:

1. Effective communication
2. Top management support
3. User involvement
4. Project manager and team members

5. Project definition
6. Project planning
7. Project control and change management
8. Technology support

Major failures of projects can be traced to various reasons such as scope creep, lack of planning, inadequate skilled resources, insufficient client feedback or input, constant changes in the project's requirements and unrealistic time estimates (Martin, 2002). In one interesting examination, Whitaker (1999) carried out a study in Canada for 1,450 leading public and private institutions to find out the reasons behind IT project failure. Three major reasons were identified; 1) poor project planning, 2) weak business case, and 3) lack of top management involvement and support.

Altmann (2005) summarized a number of studies that looked at causes of project failure causes. Six major reasons were attributed to project failure: (1) inadequate planning, (2) over-spending, (3) schedule overrun, (4) not meeting project goals and specifications, (5) unclear project definition, and (6) poor monitoring and control during the project's implementation. Eberlein (2008) points out that culture could act as a potential reason for project failure. Muriithi and Crawford (2003) argue that the NC has a direct impact on project management's application. The management of cultural differences in virtual teams is considered as important to ensure the success of any project (Eberlein, 2008). Zwikael et al., (2005) carried out a study on a total of 425 project managers, out of which 337 were from Israel and 88 were from Japan, to identify differences in project management style. The study concluded that despite the fact that most of the managers in the study ran similar projects there were significant cultural differences in their management styles. For example, Japanese project managers are more concerned with communications and cost management whereas Israeli project managers pay attention more to scope and time management processes. Nevertheless, there is limited empirical research that has investigated the impact of the culture on project management (Henrie and Sousa-Poza, 2005; Shore and Cross, 2005; Zwikael et al., 2005).

Despite the enormous amount of studies in project management, insufficient attention has been paid to how to improve project management (Winter et al., 2006). This improvement is needed especially that many organizations are operating in a global environment in which they are likely to implement global projects and/or deal with multicultural teams (Enshassi and Burgess, 1990). Such a change in work organization adds complexity to the projects specifically in how to share knowledge and manage it in a multicultural business environment. For some years, managers in organizations have realized that effective knowledge management can enhance the success of their projects and empower their employees (Alavi and Leidner, 2001; Nonaka and Takeuchi, 1995). Alavi and Tiwana (2002) argue that despite the extensive studies in knowledge management, there is a lack of research that addresses KS in diverse settings; global projects is a vital area for research study since it combines both virtual and non-virtual communication.

In addition, project management has been applied fairly extensively in different industries such as construction, engineering, telecommunications, defense and utilities. Nevertheless, several authors have called for more attention to be given to investigations of project management in non-traditional industries and especially in major areas of the services sector such as the banking industry (Carden and Egan, 2008).

## **1.2 Statement of Research Problem**

In recent years, knowledge management and processes of KS and their role in enhancing organizational success have attracted many researchers including the project management community. This interest reflects their importance for organizational survival. Indeed, it has been suggested by a number of academics and researchers that KS is a vital tool for ensuring competitive advantage in an uncertain global world (Shin et al., 2001; Davenport et al., 1998). Despite the fact that the literature on knowledge management is voluminous, limited research has examined the impact of cultural differences on the processes of knowledge management and especially KS (Bhagat et al., 2002). In addition, limited research has been conducted examining the relationship between NC and KS in different work settings such as

global projects (Alavi and Tiwana, 2002). KS in global projects is distinct from traditional projects since face-to-face communication is in general much more limited. Additional challenges for this context include the multiple geographical locations and time zones in addition to variation in national culture. Such complexity may hinder processes of KS. This dissertation therefore addresses this area of limited research by investigating the influence of NC on KS within the context of global projects in the banking industry.

### 1.3 Research Questions

**RQ1:** What is the influence of NC on KS?

**RQ2:** How does NC influence processes of KS?

**RQ3:** What constitutes global project management for global projects in the banking industry?

### 1.4 Research Objectives

*RQ1: What is the influence of NC on KS?*

**Objective 1:** Develop a theoretical understanding of NC and NC dimensions

**Objective 2:** Find out what is KS and what are its major factors

**Objective 3:** Explore KS in the banking industry context and organizational work settings

*RQ2: How does NC influence processes of KS?*

**Objective 1:** Critique previous research on the link between NC and KS

**Objective 2:** Develop a survey to assess the influence of NC on KS within the context of global projects

*RQ3: What constitutes global project management for global projects in the banking industry??*

**Objective 1:** Define the concepts of global projects and global project management

**Objective 2:** Analyze similarities and differences between global project management and global organization management

**Objective 3:** Evaluate the global project management literature and its dependence on the virtual management literature.

## **2. Literature Review**

This chapter reviews the theoretical background from four major streams of literature: Knowledge management, national culture, global organization management and global project management. A theoretical review of NC is presented, which defines NC and NC dimensions. The literature review also examines the concept of KS and processes of KS, including what is known specifically about the banking industry. Based on the review of the literature, it is noticeable that limited research has been done on the relationship between NC and KS in contemporary work settings, such as virtual work and global projects. Then, this literature review considers related theory on the management of global organizations, based on Bartlett and Ghoshal's work, before concentrating on concepts specific to the developing field of global project management. The background and theoretical knowledge on global projects is presented. Then, a comparison is made between global organization management and global project management. BankCo is chosen as a case study for considering the influence of NC on KS within the context of global projects in the banking industry.

### **2.1 National Culture Theory**

#### **2.1.1 Definition**

A review of the literature soon shows that culture is not universally defined. For example, Sørnes et al.' (2004) study found that there are more than 400 definitions available for the word, 'culture'. Nevertheless, the influence of the cultural environment in shaping the values of individuals comprising a single group, organisation, institution or society was apparent in all the numerous definitions of culture. The notion of NC has received a great deal of attention in the management literature (Hall, 1960). Understanding different cultures is very critical in order to manage multinational organizations (Hofstede, 1983). For example, Grinberg and Rubenstein's (1993) study identified two major obstacles in joint international development, one is the failure of management to be aware of the impact of socio-cultural aspects on their own decision-making processes and second is the failure of managers to understand NC diversity and how to deal with it. Another study by Lok and Crawford (2004) suggested that the differences between employees' behavior in

terms of decision making is explained by their different interest and concern to protect their national culture.

NC has been defined by many scholars. However, Hofstede's NC definition has been most frequently cited in the literature. Hofstede defined NC as "the collective programming of the mind which distinguishes the members of one group or people from another" (1983, p.42)

### **2.1.2 National Culture Dimensions**

There are many cultural elements that have been studied such as material life, language, social interactions, technology, aesthetics, religion, education, and value systems (Hauke, 2006; Loosemore and Al Muslmani, 1999). A number of studies have concluded that the variation in individuals' performance in organizations can be attributed to cultural values (Shane, 1993; Tse et al., 1988). Katz et al., (1999) argue that the NC has a direct impact on the way that the managers make decisions. Another study by Shachaf (2008) suggests that cultural difference may positively affect decision-making in teams; however, it can also impact negatively on aspects of communication. Also, some studies have found that NC will impact KS. For example Weir and Hutchings (2005) found out that Arab managers are more likely to share their knowledge more with other members of organizations whom they know and have established relationship based on mutual understanding and trust.

Over the past 20 years, many scholars from the international management research field have studied cross-national differences. Several dimensions have been proposed by scholars (Nardon and Steers, 2009). There are six major frameworks of national cultures which are mostly used and well cited in cross-cultural research. These include frameworks developed by Kluckhohn and Strodtbeck, Hofstede, Hall, Trompenaars, Schwartz, and House and his GLOBE associates.

### a) Kluckhohn and Strodtbeck

The work of Kluckhohn and Strodtbeck is considered one of the earliest cross-cultural theories to be developed and has also often been used as a foundation to form many models and frameworks that have been developed later. The authors have developed a theory of culture based on value orientations in which they argue that there are a number of problems which are similar to all human groups. Contrary to the multitude of possibilities in the entire problem, there are relatively few solutions that constitute a common culture. Their theory also claims that values in any society are distributed between individuals, and that a common set of values make up the dominant value system (Nardon and Steers, 2009; Maznevski et al., 2002). Five dimensions were proposed as fundamental to different cultures and are summarized in Table 1 below:

**Table 1: Kluckhohn and Strodtbeck's cultural dimensions**

(Source: derived from Nardon and Steers, 2009, p.4).

Cultural Dimensions	Scale Anchors		
<i>Relationship with Nature:</i> Beliefs about the need or responsibility to control nature.	Mastery: Belief that people have need or responsibility to control nature.	Harmony: Belief that people should work with nature to maintain harmony or balance.	Subjugation: Belief that individuals must submit to nature.
<i>Relationship with People:</i> Beliefs about social structure.	Individualistic: Belief that social structure should be arranged based on individuals.	Collateral: Belief that social structure should be based on groups of individuals with relatively equal status.	Lineal: Belief that social structure should be based on groups with clear and rigid hierarchical relationships.
<i>Human Activities:</i> Beliefs about appropriate goals.	Being: Belief that people should concentrate on living for the moment.	Becoming: belief that individuals should strive to develop themselves into an integrated whole.	Doing: belief on striving for goals and accomplishments.
<i>Relationship with Time:</i> Extent to which past, present, and future influence decisions.	Past: In making decisions, people are principally influenced by past events or traditions.	Present: In making decisions, people are principally influenced by present circumstances.	Future: In making decisions, people are principally influenced by future prospects.
<i>Human Nature:</i> Beliefs about good, neutral or evil human nature.	Good: Belief that people are inherently good.	Neutral: Belief that people are inherently neutral.	Evil: Belief that people are inherently evil

### b) Hofstede

Hofstede's (1983) pioneering study consisted of a survey of more than 10,000 managers in 50 countries and three multi-country regions. Initially, he developed four dimensions of national culture: Power Distance, Individualism vs. Collectivism, Masculinity vs. Femininity, and Uncertainty Avoidance. A fifth dimension called

Long-term vs. Short-term orientation was added later in a study carried out by Hofstede and Bond (1988). Table 2 below summarizes each dimension.

**Table 2: Hofstede's cultural dimensions**

(Source: Derived from Nardon and Steers, 2009, p.5)

Cultural Dimensions	Scale Anchors	
<i>Power Distance:</i> Beliefs about the appropriate distribution of power in society.	Low power distance: Belief that effective leaders do not need to have substantial amounts of power compared to their subordinates. Examples: Austria, Israel, Denmark, Ireland, Norway, Sweden.	High power distance: Belief that people in positions of authority should have considerable power compared to their subordinates. Examples: Malaysia, Mexico, Saudi Arabia.
<i>Uncertainty Avoidance:</i> Degree of uncertainty that can be tolerated and its impact on rule making.	Low uncertainty avoidance: Tolerance for ambiguity; little need for rules to constrain uncertainty. Examples: Singapore, Jamaica, Denmark, Sweden, UK.	High uncertainty avoidance: Intolerance for ambiguity; need for many rules to constrain uncertainty. Examples: Greece, Portugal, Uruguay, Japan, France, Spain.
<i>Individualism-Collectivism:</i> Relative importance of individual vs. group interests.	Collectivism: Group interests generally take precedence over individual interests. Examples: Japan, Korea, Indonesia, Pakistan, Latin America.	Individualism: Individual interests generally take precedence over group interests. Examples: US, Australia, UK, Netherlands, Italy, Scandinavia.
<i>Masculinity-Femininity:</i> Assertiveness vs. passivity; material possessions vs. quality of life.	Masculinity: Values material possessions, money, and the pursuit of personal goals. Examples: Japan, Austria, Italy, Switzerland, Mexico.	Femininity: Values strong social relevance, quality of life, and the welfare of others. Examples: Sweden, Norway, Netherlands, Costa Rica.
<i>Long-term vs. Short-term Orientation:</i> Outlook on work, life, and relationships.	Short-term orientation: Past and present orientation. Values traditions and social obligations. Examples: Pakistan, Nigeria, Philippines, Russia.	Long-term orientation: Future orientation. Values dedication, hard work, and thrift. Examples: China, Korea, Japan, Brazil.

Hofstede's dimensions have been heavily criticized on both theoretical and empirical grounds. For example, Baskerville-Morley (2005) argues that Hofstede's dimensions fail to understand socio-cultural relationships and does not take into consideration the diverse ethnicities that exist within cultures. In addition, McSweeney (2002) has questioned the methodological approach that Hofstede applied. For example, he argues that the sample used in the study was very small and thus it does not reflect the true picture of any single nation. Nevertheless, it should be noted that the complexity of any culture was acknowledged by Hofstede (1983).

### c) Hall

Hall (1960) investigated culture values based on ethnographic research in many societies; Germany, United States (US) and Japan are some of them. His work was dedicated mostly towards understanding how cultures are different when it comes to interpersonal communication. In addition, he also studied other work elements such as personal space and time. He produced a framework which includes three main



cultural dimensions (See Table 3). It should be acknowledged that in cross-cultural management, several terms have been originated from Hall's work such as Monochronic/Polychronic (Hall and Hall, 1990; Nardon and Steers, 2009).

**Table 3: Hall's cultural dimensions**

(Source: derived from (Nardon and Steers, 2009, p.5).

Cultural Dimensions	Scale Anchors	
<i>Context</i> : Extent to which the context of a message is as important as the message itself.	Low context: Direct and frank communication; message itself conveys its meaning. Examples: Germany, US, Scandinavia.	High context: Much of the meaning in communication is conveyed indirectly through the context surrounding a message. Examples: Japan, China.
<i>Space</i> : Extent to which people are comfortable sharing physical space with others.	Center of power: Territorial; need for clearly delineated personal space between themselves and others. Examples: US, Japan.	Center of community: Communal; comfortable sharing personal space with others. Examples: Latin America, Arab States.
<i>Time</i> : Extent to which people approach one task at a time or multiple tasks simultaneously.	Monochronic: Sequential attention to individual goals; separation of work and personal life; precise concept of time. Examples: Germany, US, Scandinavia.	Polychronic: Simultaneous attention to multiple goals; integration of work and personal life; relative concept of time. Examples: France, Spain, Mexico, Brazil, Arab States.

#### d) Trompenaars and Hampden-Turner

Trompenaars and Hampden-Turner published their “Seven Dimensions of Culture” model to explain NC differences in terms of both values and personal relationships. Their seven dimensions are categorized into three major groups namely: relationships with others, time, and environment (Milosevic, 1999). Explanations of each category are summarized in Tables 4 and 5.

**Table 4: Trompenaars' cultural dimensions categorization**

Category	Dimensions
<b>Relationships with others</b>	1) Universalism / Particularism 2) Individualism / Communitarianism 3) Emotional / Neutral 4) Specific / Diffuse 5) Achievement / Ascription
<b>Time</b>	6) Sequential / Synchronic
<b>Environment</b>	7) Internal / External control

**Table 5: Trompenaars' cultural dimensions**

(Source: derived from Nardon and Steers, 2009, p.6)

Cultural Dimensions	Scale Anchors	
<i>Universalism-Particularism</i> : Relative importance of applying standardized rules and policies across societal members; role of exceptions in rule enforcement.	Universalism: Reliance on formal rules and policies that are applied equally to everyone. Examples: Austria, Germany, Switzerland, US.	Particularism: Rules must be tempered by the nature of the situation and the people involved. Examples: China, Venezuela, Indonesia, Korea.
<i>Individualism-Collectivism</i> : Extent to which people derive their identity from within themselves or their group.	Individualism: Focus on individual achievement and independence. Examples: US, Nigeria, Mexico, Argentina.	Collectivism: Focus on group achievement and welfare. Examples: Singapore, Thailand, Japan.
<i>Specific-Diffuse</i> : Extent to which people's various roles are compartmentalized or integrated.	Specific: Clear separation of a person's various roles. Examples: Sweden, Germany, Canada, UK, US.	Diffuse: Clear integration of a person's various roles. Examples: China, Venezuela, Mexico, Japan, Spain.
<i>Neutral-Affective</i> : Extent to which people are free to express their emotions in public.	Neutral: Refrain from showing emotions; hide feelings. Examples: Japan, Singapore, UK.	Affective: Emotional expressions acceptable or encouraged. Examples: Mexico, Brazil, Italy.
<i>Achievement-Ascription</i> : Manner in which respect and social status are accorded to people.	Achievement: Respect for earned accomplishments. Examples: Austria, US, Switzerland.	Ascription: Respect for ascribed or inherited status. Examples: Egypt, Indonesia, Korea, Hungary.
<i>Time Perspective</i> : Relative focus on the past or the future in daily activities.	Past/present oriented: Emphasis on past events and glory. Examples: France, Spain, Portugal, Arab countries.	Future oriented: Emphasis on planning and future possibilities. Examples: China, Japan, Korea, Sweden, US.
<i>Relationship with Environment</i> : Extent to which people believe they control the environment or it controls them.	Inner-directed: Focus on controlling the environment. Examples: Australia, US, UK.	Outer-directed: Focus on living in harmony with nature. Examples: China, India; Sweden, Egypt, Korea.

**e) Schwartz**

Schwartz studied school teachers and college students in 54 countries. His study is based on the assumption that social values vary between cultures due to individuals' motivational goals. However, his study concluded that there are ten major universal values that exist in all cultures and are fundamental to human existence. These values are: power, achievement, hedonism, stimulation, self-direction, universalism, benevolence, tradition, conformity, and security (Nardon and Steers, 2009; Schwartz, 1999, 2006). Based on these previously mentioned values Schwartz developed three dimensions called: Conservatism versus Autonomy, Hierarchy versus Egalitarianism, and Mastery versus Harmony; these are summarized in Table 6. It should be noted that this model has been mostly used to study social behavior and has had very limited uptake in organizational studies (Bond, 2001: cited in Nardon and Steers, 2009).

**Table 6: Schwartz's cultural dimensions**

(Source: derived from Nardon and Steers, 2009, p.7)

Cultural Dimensions	Scale Anchors	
<i>Conservatism-Autonomy:</i> Extent to which individuals are integrated in groups.	Conservatism: individuals are embedded in a collectivity, finding meaning through participation and identification with a group that shares their way of life.	Autonomy: individuals are autonomous from groups, finding meaning on their own uniqueness. Two types of autonomy: Intellectual autonomy: (independent pursuit of ideas and rights) and Affective autonomy (independent pursuit of affectively positive experience).
<i>Hierarchy-Egalitarianism:</i> Extent to which equality is valued and expected.	Hierarchy: cultures are organized hierarchically. Individuals are socialized to comply with their roles and are sanctioned if they do not.	Egalitarianism: Individuals are seen as moral equals who share basic interests as human beings.
<i>Mastery-Harmony:</i> Extent to which people seek to change the natural and social world to advance personal or group interests.	Mastery: individuals value getting ahead through self-assertion and seek to change the natural and social world to advance personal or group interests.	Harmony: individuals accept the world as it is and try to preserve it rather than exploit it.

#### **f) GLOBE**

GLOBE is a multi-phase, multi-method project in which over 17,000 middle managers from 62 cultures participated in the research study which lasted for about 10 years (House et al., 2004). A primary focus of this study was to understand the impact of cultural differences on leadership processes. As a result of this study nine cultural dimensions were identified. The first two, namely Future Orientation and Humane Orientation, originated from Klukhohn and Strodbeck (1961) cited in House et al., 2004. Performance Orientation is the third dimension which is derived from McClelland (1961), cited in House et al., 2004, and the remaining 6 dimensions were all based on Hofstede's 1983 dimensions. For example, they retained the same definitions for Power Distance and Uncertainty Avoidance whereas they substituted the Masculinity vs. Femininity dimension with Gender Egalitarianism and Assertiveness. They also introduced two additional dimensions which originated from Hofstede's Individualism vs. Collectivism dimension. However, they replaced it with two new dimensions called In-group Collectivism and Institutional Collectivism (House et al., 2004). Explanations for each dimension are given in Table 7:

**Table 7: GLOBE's cultural dimensions**

(Source: derived from Nardon and Steers, 2009, p.8)

Cultural Dimensions	Scale Anchors	
<i>Power Distance:</i> Degree to which people expect power to be distributed equally.	High: Society divided into classes; power bases are stable and scarce; power is seen as providing social order; limited upward mobility.	Low: Society has large middle class; power bases are transient and sharable; power often seen as a source of corruption, coercion, and dominance; high upward mobility.
<i>Uncertainty Avoidance:</i> Extent to which people rely on norms, rules, and procedures to reduce the unpredictability of future events.	High: Tendency to formalize social interactions; document agreements in legal contracts; be orderly and maintain meticulous records; rely on rules and formal policies.	Low: Tendency to be more informal in social interactions; reliance on word of people they trust; less concerned with orderliness and record-keeping; rely on informal norms of behavior.
<i>Humane Orientation:</i> Extent to which people reward fairness, altruism, and generosity.	High: Interests of others important; values altruism, benevolence, kindness, and generosity; high need for belonging and affiliation; fewer psychological and pathological problems.	Low: Self-interest important; values pleasure, comfort, and self-enjoyment; high need for power and possessions; more psychological and pathological problems.
<i>Institutional Collectivism:</i> Extent to which society encourages collective distribution of resources and collective action.	High: Individuals integrated into strong cohesive groups; self viewed as interdependent with groups; societal goals often take precedence over individual goals.	Low: Individuals largely responsible for themselves; self viewed as autonomous; individual goals often take precedence over societal or group goals.
<i>In-Group Collectivism:</i> Extent to which individuals express pride, loyalty, and cohesiveness in their organizations and families.	High: Members assume they are interdependent and seek to make important personal contributions to group or organization; long-term employer-employee relationships; organizations assume major responsibility of employee welfare; important decisions made by groups.	Low: Members assume they are independent of the organization and seek to stand out by making individual contributions; short-term employer-employee relationships; organizations primarily interested in the work performed by employees over their personal welfare.
<i>Assertiveness:</i> Degree to which people are assertive, confrontational, and aggressive in relationships with others.	High: Value assertiveness, dominance, and tough behavior for all members of society; sympathy for the strong; value competition; belief in success through hard work; values direct and unambiguous communication.	Low: Prefers modesty and tenderness to assertiveness; sympathy for the weak; values cooperation; often associates competition with defeat and punishment; values face-saving in communication and action.
<i>Gender Egalitarianism:</i> Degree to which gender differences are minimized.	High: High participation of women in the workforce; more women in positions of authority; women accorded equal status in society.	Low: Low participation of women in the workforce; fewer women in positions of authority; women not accorded equal status in society.
<i>Future Orientation:</i> Extent to which people engage in future-oriented behaviors such as planning, investing, and delayed gratification.	High: Greater emphasis on economic success; propensity to save for the future; values intrinsic motivation; organizations tend to be flexible and adaptive.	Low: Less emphasis on economic success; propensity for instant gratification; values extrinsic motivation; organizations tend to be bureaucratic and inflexible.
<i>Performance Orientation:</i> Degree to which high performance is encouraged and rewarded.	High: Belief that individuals are in control of their destiny; values assertiveness, competitiveness, and materialism; emphasizes performance over people.	Low: Values harmony with environment over control; emphasizes seniority, loyalty, social relationships, and belongingness; values who people are more than what they do.

Recent studies argue that NC continues to be extensively investigated and many frameworks have been developed as a result (Zwikaël et al., 2005). However, the

literature also acknowledges that NC dimensions often vary from study to study. Nardon and Steers (2009) argue that the lack of convergence of the NC dimensions creates a great challenge for researchers. It should perhaps be accepted that the aim of reviewing the different dimensions is not to prove which one is universally better than the others or to question the validity of all of these dimensions. Rather, the purpose is to identify which one is more suitable for the purposes of a particular study while continuing to analyse and evaluate the possibilities for integrating some of these models. Nardon and Steers (2009) propose that all six major models represent different angles for the study of NC and thus it is not appropriate to favor one exclusively over the others. It is important therefore to continue to compare these models to understand their different strengths and find out common themes between them- See Table 8 in which the authors have sought to integrate the six models to create a common set of dimensions.

**Table 8: Core cultural dimensions: an integrative summary**

(Source: derived from Nardon and Steers, 2009, p.10)

Core Cultural Dimensions	Focus of Dimensions
Hierarchy-Equality	<i>Power distribution in organizations and society:</i> Extent to which power and authority in a society are distributed hierarchically or in a more egalitarian and participative fashion.
Individualism-Collectivism	<i>Role of individuals and groups in social relationships:</i> Extent to which social relationships emphasize individual rights and responsibilities or group goals and collective action; centrality of individuals or groups in society.
Mastery-Harmony	<i>Relationship with the natural and social environment:</i> Beliefs concerning how the world works; extent to which people seek to change and control or live in harmony with their natural and social surroundings.
Monochronism-Polychronism	<i>Organization and utilization of time:</i> Extent to which people organize their time based on sequential attention to single tasks or simultaneous attention to multiple tasks; time as fixed vs. time as flexible.
Universalism-Particularism	<i>Relative importance of rules vs. relationships in behavioral control:</i> Extent to which rules, laws, and formal procedures are uniformly applied across societal members or tempered by personal relationships, in-group values, or unique circumstances.



## 2.2 Knowledge Sharing

### 2.2.1 Define knowledge

Before proceeding on to the next chapter, it is necessary to define the term 'knowledge' that is used in this dissertation. No consensus has yet been reached within academia as to how 'knowledge' should be explained, and the definitions that appear in the field are often vague and complex. For example, throughout the literature relating to knowledge management, KS has been defined differently by many authors. This variation is attributed to the evolving definitions of the word "knowledge", which in part might be related to the different backgrounds of the scholars. Alavi and Leidner (1999) have reviewed all the literature that has defined knowledge. Based on this investigation they proposed six main attributes of knowledge- See Table 9.

**Table 9: Different views of knowledge**

(Source: derived from Alavi and Leidner (1999), p.13)

Views	Explanation	Implication
<b>Knowledge vis-à-vis information and data</b>	Data is fact, raw numbers. Information is processed/interpreted data. Knowledge is personalized information.	KM focuses on exposing individuals to potentially useful information and facilitating assimilation of information.
<b>State of mind</b>	Knowledge is the state of knowing and understanding.	KM involves enhancing an individual's learning and understanding through provision of information.
<b>Object</b>	Knowledge is an object to be stored and manipulated.	Key KM issue is building and managing knowledge stocks.
<b>Process</b>	Knowledge is a process of applying expertise.	KM focus is on knowledge flows and the process of creating, sharing, and distributing knowledge.
<b>Access to information</b>	Knowledge is a condition of access to information.	KM focus is the organized access to and retrieval of content.
<b>Capability</b>	Knowledge is the potential to influence action.	KM is about building core competencies and understanding strategic know-how.

Alavi and Leidner (1999) defined knowledge as follows: "knowledge is a justified belief that increases an entity's capacity for taking effective action" (Alavi and Leidner, 1999, p.14). Two major phases are required in order for knowledge to become constituted. First is when the information is stored and transformed to a form of data and second is the process of its absorption. Muthusmay and White (2005) argue that both of these processes are important, and that absorption relies heavily on what is called "absorptive capacities". Cohen et al., (1990) define absorption as the ability of the recipient to understand and use the knowledge. NC, organizational culture, human resource systems and resources are the factors that influence the absorptive capacity of the individual (Cohen et al., 1990; Muthusmay and White, 2005).

It is evident in the literature that several researchers have used information and knowledge interchangeably. However, a clear distinction has been made between the two in many research agendas. Accordingly, five major distinctions have been made. First, knowledge entails a knower. Second, information is easy to code and share in comparison to knowledge. Third, information requires less effort to understand whereas knowledge takes longer time and effort to be absorbed. Fourth, information can occur separately whereas knowledge can only exist when it is linked to the individual. Fifth, information entails applied competencies such as in information systems and computer science whereas knowledge requires soft skills and competencies such as social interaction and interpersonal communication (Bhagat et al., 2002; Hauke, 2006; Smal and Sage, 2005).

### **2.2.2 Knowledge types**

Several types of knowledge have been discussed in the literature. Bhagat et al., (2002) claim that there are three types of knowledge, namely: 1) Tacit versus explicit, 2) simple versus complex and 3) independent versus systemic. The first is based on the extent that knowledge is articulated or implicated. It should be noted that Polanyi (1966) was the founder of these concepts, which were then further investigated by Nonaka and Takeuchi (1995).

Smal and Sage (2005) examined two aspects of knowledge—explicit knowledge and tacit knowledge—explicit knowledge can be codified and stored in a formal and logical form such as in databases, documents, manuals and books. Thus it could be accessed and shared easily. Whereas tacit knowledge is linked to the individual's personality, skills and experience such as subjective insights, assumptions and perceptions. Therefore, it is not easy to articulate it. Face-to-face interaction, socialization and informal interactions are some of the suggested methods that can be used to share tacit knowledge (Nonaka and Takeuchi, 1995).

The second type of knowledge, simple versus complex, considers the amount of information needed to understand the required knowledge. Simple knowledge does not require a lot of information in order to be absorbed and transferred. Complex knowledge, which underlines the fact that as there is more information to be understood, uncertainties and effort will, as a result, consume more resources than will simple knowledge. The last type independent versus systemic is made on the basis of whether knowledge is rooted in the organizational context or not (Bhagat et al., 2002).

Based on the above categorization of knowledge, it is apparent the KS for simple, independent and explicit types tends to be easier due to their objective nature. In contrast, complex, tacit and systemic knowledge types are more likely to be harder to share due to their more subjective nature.

Other authors have also introduced other types of knowledge. For example, Bhagat et al., (2002) discusses human knowledge, social knowledge and structured knowledge. Alternatively Orlikowski, (2002) developed a practice-based perspective on knowledge. Knowledge related to government issues, knowledge of the culture and knowledge of market traits has been developed by Si and Bruton (1999).

Reviewing the literature, all the former types either fall into the tacit or explicit category. The reasons for this clustering are many and the distinction has been made in many different fields of research such as economics and psychology and has been



advocated across diverse interpretations and definitions of the term, knowledge. However, it should be acknowledged that the tacit versus explicit category is the most commonly used type throughout the knowledge management literature and the most accepted approach for distinguishing different types of knowledge (Alavi, and Leidner, 2001; Nonaka and Takeuchi, 1995; Smal and Sage, 2005; Smith, 2001)

### **2.2.3 Knowledge management**

#### **2.2.3.1 Definition of Knowledge management**

The field of knowledge management has been evolving as a discipline and fairly ambiguous meanings have become commonplace due to its intangible nature. Knowledge management refers to the organization's management of its intangible knowledge (Stewart et al., 2000). Knowledge management might be viewed as a way or a process that an organization recognizes and manages its own treasury- knowledge for its best interest (Liebowitz and Megbolugbe, 2003).

#### **2.2.3.2 Knowledge management processes**

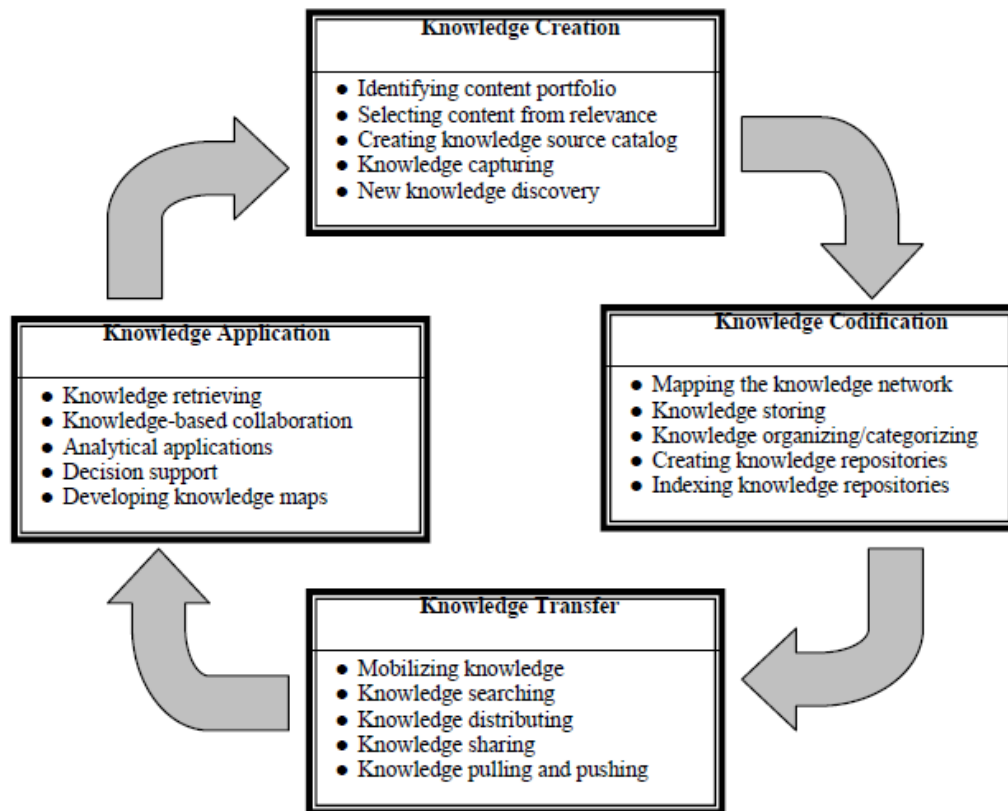
In most respects, a clear distinction has been made between the traditional operational or administrative work processes and knowledge management processes. The literature acknowledges that the first deals with less uncertainty when it comes to tangible inputs whereas knowledge management processes are known to occur with less tangibility and thus have to deal with greater uncertainty (Alavi and Leidner, 1999, 2001).

**Table 10: Knowledge Management processes different concepts**

Knowledge Management Processes	Developed by
Acquiring, creating, packaging, applying, and reusing knowledge	Davenport et al., 1996
Content generation, organization, development and distribution	Garvin, 1997
Knowledge generation, codification and transfer	Grove and Davenport, 2001
Creation, storage, transfer, and application	Alavi and Leidner, 2001
Knowledge acquisition, conversion, application and protection	Gold et al., 2001

The findings from the literature and investigation of these different cultural processes suggest there is an overlap between the terminologies applied in research studies and researchers have been to examine how to merge them. For example, acquiring, content generation, knowledge generation, creation and knowledge acquisition all refer to the same concept of explicit or implicit knowledge. Knowledge management processes have been summarized into four major processes (Gover and Davenport, 2001). With reference to Figure 1, knowledge management is classified into four major processes as follows:

1. Knowledge *creation* which refers to all the activities to acquire and develop the knowledge
2. Knowledge *codification* is the transformation of knowledge acquired in knowledge creation into an accessible source which can be used
3. *KS* refers to the transfer of the knowledge that has been already coded
4. Knowledge *application* is the last stage of knowledge management processes and refers to the actual use of the knowledge. It should be noted that this process requires management support in term of required decisions and needed actions.



**Figure 1: Knowledge Management processes**

(Source: derived from Hsia et al., 2006, p.16)

### 2.2.3.3 What is Knowledge Sharing?

Research suggests that KS is not solely a subset of knowledge management but it can be considered as a particular process and type of knowledge management. Despite the fact that knowledge management term is now a comparatively well-established discipline, it is apparent in the literature that KS is not applied as a standard term. Several different terms are used to indicate the same thing such as knowledge distribution and knowledge transfer (Garvin, 1997; Gover and Davenport, 2001). For example, knowledge transfer and KS have been used interchangeably in Ford and Chan's (2003) extensive study. However, Wang and Noe (2010) made a clear distinction between knowledge transfer, KS, and knowledge exchange. They argued that KS is a term that can be distinguished in the context of knowledge transfer which refers to two combined processes of sharing and application. The term knowledge transfer is used to refer to the movement of knowledge in the organization including the flow of information between diverse divisions and departments such as different functional areas like marketing and finance. They have suggested that the term

knowledge exchange is flexible and may be used interchangeably with KS since it is a combination of sharing and seeking knowledge. For the purpose of this study, however, KS will be used as the standard term.

In this dissertation, KS is understood as "a team process defined as team members sharing task-relevant ideas, information, and suggestions with each other (Abhishek, et al., 2006, p.1239). The previous definition has been taking into consideration because it is suitable within the context NC which has been discussed earlier and it is also applicable to the context of global project management which will be discussed later.

#### **2.2.3.4 Knowledge Sharing in the work setting**

Throughout much of the knowledge management literature, KS has received more attention than most other processes. For example, Grant (1996) and Ford and Chan (2003) identified KS as the main driver of knowledge processes. In the organization context, KS is considered as the most difficult knowledge management process among other processes, because employees might not be open to share their knowledge or the organization may have its own obstacles that might prevent employees to share their knowledge.

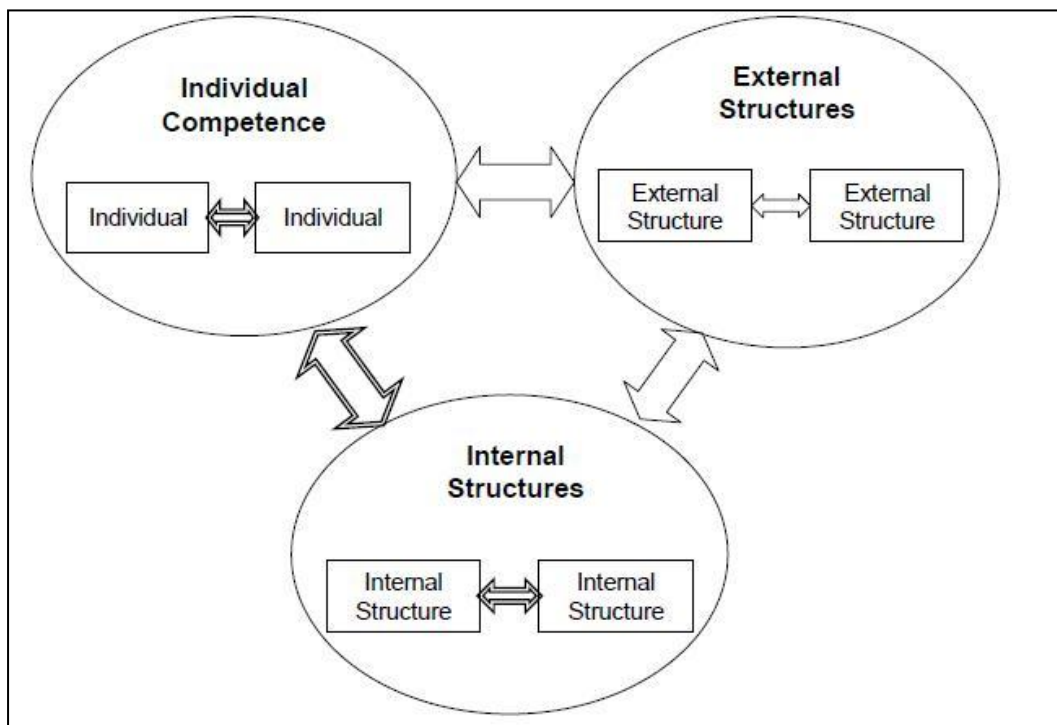
Across manufacturing and service industries, KS is considered as a primary source of competitive advantage (Bresman et al., 1999; Reid, 2003). There are many studies that have concluded that maintaining and managing KS in the organization can yield tremendous benefits such as reduced traditional learning curves, improved team interaction and performance, increased organizational innovation and reduced costs (Arthur and Huntley, 2005; Calantone et al., 2002; Collins and Smith, 2006; Cummings, 2004; Hansen, 2002; Lin, 2007).

More organizations than before are investing heavily in knowledge management (KM) initiatives or knowledge management systems (KMS). However, many of them have failed to achieve their goals. Wang and Noe (2010, p.115-116), comment "despite these investments it has been estimated that at least \$31.5 billion are lost per

year by Fortune 500 companies as a result of failing to share knowledge. An important reason for the failure of KMS to facilitate knowledge sharing is the lack of consideration of how the organizational and interpersonal context, as well as individual characteristics, influence knowledge sharing".

Taking into consideration the organization context, knowledge might be shared through top-down, bottom-up, or horizontal processes (Mom et al., 2007). However, other areas of the literature, argue that KS is an individualized behavior that requires the person to be open to sharing his/her knowledge (Kelloway and Barling, 2000). In Bock and Kim's (2002) interesting study they concluded that KS between individuals in organizations is a very critical task and individuals will voluntarily share their knowledge if they are motivated to do so.

Knowledge exists at several levels within organizations (De Long and Fahey, 2000). With reference to Figure 2, KS processes in the organization have been categorized into nine major types (Sveiby, 2001; Sveiby and Simons, 2002):



**Figure 2: Knowledge levels within organizations**

(Source: derived from Sveiby, 2001, p.348)

1. Between individuals
2. From individuals to external structures
3. From external structures to individuals
4. From individual competence to internal structures
5. From internal structures to individual competence
6. Within external structures
7. From external to internal structures
8. From internal to external structures
9. Within internal structures

Three major concepts have been developed by Sveiby (2001) to explain the different types of KS activities. First, the external structure which refers to intangible relationships with customers and suppliers. The second is internal structure which could be looked at as the people and direct actions within the organization. The last concept is individual competence which is used to describe the organization's expertise such as professionals, technical and sales employees. Sveiby (2001) argues that the last concept might be controversial for many. However, he points out that such a distinction between professional/technical staff and support/managerial staff is required when considering KS processes. He argues that most of the studies suggested that the lack of KS is at its lowest level between the two previously mentioned groups.

To a certain extent, all nine KS activities do exist in an organization. However, the impact of the organization culture and management support can affect them either positively or negatively. Sveiby and Simons (2002) point out that among all these KS activities, KS between individuals in the internal structure is the most challenging process. They elaborate that an individual's knowledge constitutes internal power in the organization and the challenge increases when individuals come from different backgrounds and nationalities.

Cultural diversity is a vital characteristic of multicultural organizations which has a major impact on the process of sharing knowledge between individuals. Specifically, NC has a direct effect on the attitudes of individuals to share their knowledge. De Long and Fahey (2000) argue that NC has a high impact on hindering or facilitating KS and influences the attitudes and behaviours of individuals. There are several studies that have examined the impact of NC on KS (eg. Chow, et al., 2000; Dulaimi, 2007; Michailova and Hutchings, 2006; Weir and Hutchings, 2005). As stated earlier

in this dissertation KS is "a team process defined as team members sharing of task-relevant ideas, information, and suggestions with each other" (Srivastava et al., 2006, p.1239). The influence of NC on KS between individuals or teams organized in global projects is the focus of the research study for this dissertation.

**Proposition 1:** NC is expected to have influence on KS (Chow, et al., 2000; De Long and Fahey, 2000; Dulaimi, 2007; Michailova and Hutchings, 2006; Weir and Hutchings, 2005).

**H1:**

**H0:** There is no statistical relationship between the influence of NC and KS

**HA:** There is a statistical relationship between the influence of NC and KS

#### **2.2.3.5 Knowledge Sharing factors**

Synthesis of prior research identifies several factors that can enhance KS. Nevertheless, some authors argue that KS factors within the context of organizations are not well understood (Connelly and Kelloway, 2003; Ruggles, 1998). The use of effective technology can enhance KS between individuals in an internal structure (Sveiby, 2001). However, the findings from prior research point towards other important social factors—such as building trust, mutual understating and accepting each others cultural differences, norms, identification and openness in organizational culture—are the main facilitators of KS (Jashapara, 2005; Nahapiet and Ghoshal, 1998; Von Krogh, 1998). Other factors include, effective communications and positive cultural interaction (O'Dell and Grayson, 1998), culture (Ford and Chan, 2003), motivation (Constant et al., 1994; Ko et al., 2005), extrinsic motivation - e.g. monetary reward (Bartol and Srivastava, 2002; Osterloh and Frey, 2000), and leadership (Kyriakidou, 2004), intention to share knowledge (Fishbein and Ajzen, 1981; So and Bolloju, 2005), attitude toward behavior (Fishbein and Ajzen, 1981; So and Bolloju, 2005), subjective norm (Bock et al., 2005; Fishbein and Ajzen, 1981), perceived behavioral control (So and Bolloju, 2005; Sun and Scott, 2005), anticipated relationship (Bock et al., 2005; Lu et al., 2006), self-efficiency (Bock et al., 2005; Lu et al., 2006), social networks (Kim and Lee, 2006), perceived usefulness

of the technology and organizational support (Bock et al., 2005; Lu et al., 2006), and NC(Chow et al., 2000).

#### **2.2.3.6 Previous research in Knowledge Sharing factors**

Bock et al., (2005) have investigated factors that enhance or discourage KS intentions of employees in an organization. The researchers employed a framework based on the theory of reasoned action (TRA). The researchers added extrinsic motivators, social-psychological forces, and organizational climate factors. The cumulative factors can be classified into three major categories namely: 1) economic such as anticipated extrinsic rewards-eg money or promotion, 2) social-psychological such as anticipated reciprocal relationships and sense of self-worth and 3) sociological including fairness, innovativeness, and affiliation. In their study, 154 managers from 27 Korean organizations participated in the field survey.

The study findings suggest that attitude towards KS, subjective norms and organizational climate will influence individual's intention to share knowledge. For example, a positive attitude toward KS is influenced by anticipated reciprocal relationships rather than extrinsic rewards. The study also found out that extrinsic rewards influence positive attitude toward KS negatively. Anticipated reciprocal relationships positively influence attitudes towards KS. The study also found a relationship between sense of self-worth and organizational climate influence subjective norms. A major drawback of this study is that the researchers concentrated on studying the individuals' intention to share knowledge rather than their actual KS behaviors.

Connelly and Kelloway (2003) explored the employees' perceptions about KS from two main perspectives. First they investigated the organizational factors such as employees' perceptions of management's support for KS, their perceptions of the organization's social interaction culture, the organization's size, and the organization's available KS technology. Second, they examined whether individual factors including age, gender, and organizational tenure, have an influence on employees' perceptions of a KS culture. The study found that managerial support for KS, perceptions of a



positive social interaction culture and the presence of technology, as a facilitator to share knowledge, have positive impact on KS. However, Connelly and Kelloway's (2003) results suggested a negative relation between organization's size and KS. In addition, gender was a significant moderator. For example, males require less social interaction before they perceive a KS culture as positive in contrast to their female counterparts.

#### **2.2.3.7 Previous research on the influence of National Culture dimensions on Knowledge Sharing factors**

Riege (2005) has identified six factors that hinder KS, namely: lack of communication skills, weak social networks, low tolerance of NC differences, over-emphasis on status position, and lack of time and trust. However, his study concluded that NC has the greatest impact on the KS process. Indeed, recent research in knowledge management has acknowledged that KS is directly influenced by NC (Hofstede, 2001(cited in Ardichvili et al., 2006 p.105); Hutchings and Michailova, 2004).

Chow et al's (2005) study examined empirically the interaction effects of NC and contextual factors: the nature of the knowledge and the relationship between the knowledge sharer and recipient, and their influence on employees' intention to share knowledge with coworkers. The study employed quantitative and open-ended responses to two scenarios gathered from 104 managers from the US and 38 managers from China. Several NC attributes were chosen to inform the study including individualism/collectivism, concern for face, Confucian dynamism, ingroup/outgroup. The findings of the study indicate that unlike collectivistic (China) managers, managers in the individualistic (US) do not share their knowledge when there is conflict between self and collective interests. On the other hand, collectivistic (China) managers tend not to share their knowledge if the person is not classified as part of the "in-group". However, individualistic (US) managers do not place such importance on collective affiliations.

**Proposition 2:** An individual is expected to share his/her knowledge if he/she has the intention to do so (Ajzen, 1991; Alrawi and Elkhatab, 2009; Bock et al., 2005; Chatzoglou and Vraimaki, 2009; David, 2002; Fishbein, and Ajzen, 1981; Osman 2007; So and Bolloju, 2005). Prior research suggests that Individualism/Collectivism is likely to impact on KS intention (Chow et al., 2005).

## **H2**

**H0:** A collectivistic culture is not likely to intend to share knowledge than individualistic culture.

**HA:** A collectivistic culture is more likely to intend to share knowledge than an individualistic culture.

Png et al., (2001) have investigated the impact of NC dimensions- Uncertainty Avoidance and Power Distance- on the adoption of information technology-IT. The researchers have conducted the data by adopting a multinational survey from 153 businesses from 24 countries. The results indicated that cultures with high uncertainty avoidance were less likely to adopt to IT. Whereas, power distance does not have any impact. Zakour's ( 2004) study found that people in high-context cultures can be expected to have less strong perception of IT usefulness than people in low-context cultures. In addition, it is believed that cultures with a Monochronic time orientation are more likely to perceive the usefulness of IT than will cultures with a Polychronic orientation to time.

**Proposition 3:** An individual will share his/her knowledge if he/she perceives the technology is useful (Alrawi and Elkhatab ,2009; Bock et al., 2005; Connelly and Kelloway, 2003; Hsiu-Fen Lin, 2007; Lu et al., 2006; Sveiby, 2001;Tan et al, 2010). Prior research has found a relationship between the adoption of technology and uncertainty avoidance (Png et al., 2001)

**H3:**

**H0:** Cultures with low uncertainty avoidance and cultures with high uncertainty avoidance will demonstrate similar perceptions of the usefulness of technology.

**HA:** Cultures with high uncertainty avoidance will reveal a lower perception of the usefulness of technology than will low uncertainty avoidance cultures.

**Proposition 4:** Being from high context cultures or low context cultures will influence perception of the usefulness of technology (Zakour, 2004)

**H4:**

**H0:** In comparison to low context cultures, the high context cultures will not have a different perception of the usefulness of technology.

**HA:** In comparison to low context cultures, high context cultures will have a lower perception of the usefulness of technology.

**Proposition 5:** Perceived usefulness of the technology is likely to relate to the monochronic versus polychronic dimension.

**H5:**

**H0:** Monochronic cultures will not perceive the usefulness of technology any higher than will cultures with a polychronic orientation to time

**HA:** Monochronic cultures will perceive the usefulness of technology more highly than will cultures with a polychronic orientation to time.

Extrinsic motivation - e.g. monetary reward is considered to be one of the most important factors that influence KS behavior (Bartol and Srivastava, 2002; Osterloh and Frey, 2000; Tan et al., 2010). For example, Hsu (2006) carried out an extensive study of nine companies in Taiwan. His study concluded that high performing Taiwanese firms use extrinsic rewards to enhance KS behavior.

There is a general agreement in the knowledge management literature that motivation has an impact on KS. On the other hand, there is an unsolved debate among

researchers on whether extrinsic motivation or intrinsic motivation has a higher influence on KS behavior. One important element that has been considered while studying this debate is to link the extrinsic or intrinsic motivation to the NC (Hass, et al., 2009). However, extrinsic motivation varies from one NC to another.

Gammelgaard (2007) carried out a cross-cultural study to find out what incentives would encourage employees to share their KS in relation to national culture. 1,535 respondents from 9 different organizations located in 4 different countries participated in the study. Across all the national cultures, the study found out that extrinsic motivation such as bonuses or promotions do not motivate employees to share their knowledge. Intrinsic motivation such as acknowledgement, support and respect enhance KS behavior. However, another study by Hass et al., (2009) found that collective cultures prefer intrinsic motivation whereas individualistic cultures prefer extrinsic motivation in order to share their knowledge.

**Proposition 6:** An individual is expected to share his/her knowledge if he/she receives extrinsic motivation - e.g. monetary reward (Bartol and Srivastava, 2002; Osterloh and Frey, 2000; Tan et al, 2010). Extrinsic motivation impact varies significantly between collective and individualistic cultures (Hass et al., 2009)

#### **H6:**

**H0:** Collectivistic and individualistic cultures are not expected to share their knowledge when they receive extrinsic motivation.

**HA:** Unlike collectivistic culture cultures, individualistic cultures are expected to share their knowledge when they receive extrinsic motivation.

As stated previously, a social network is one of the most important factors that have a direct influence on KS (Kim and Lee, 2006). Davenport and Prusak, (1998) argue that the more the person has a large social network the more that he/she will share knowledge with others in the network. The NC has a direct impact on the social network factor. For example, cultures such as US that are typified as being

individualistic, small power distance and weak uncertainty avoidance this cultural type is expected to have a smaller social network compared to cultures such as Japan which is categorized with high power distance and high uncertainty avoidance. Within this context it is expected that KS in Japan will be higher than in the US (Hofstede, 1991, 2001; Triandis, 1995: cited in Griffith et al., 2006).

**Proposition 7:** Prior research predicts that individualistic, small power distance and weak uncertainty avoidance cultures are likely to have small social networks

**H7a:**

**H0:** People in individualistic cultures will not have small social networks in comparison to people in collectivistic cultures.

**HA:** People in individualistic cultures will have small social networks in comparison to people in collectivistic cultures.

**H7b:**

**H0:** People in cultures with low power distance will not have small social networks in comparison to people in high power distance

**HA:** People in cultures with low power distance will have small social networks in comparison to people in high power distance.

**H7c:**

**H0:** People in high uncertainty avoidance cultures will not have high social network in comparison with people in collectivistic cultures.

**HA:** People in high uncertainty avoidance cultures will have high social network in comparison with people in collectivistic cultures.

Prior research suggests perceived loss of knowledge or power or fear of loss of ownership are critical factors in KS and have been linked to the notion of NC. People do not share their knowledge because they are afraid of losing ownership of their knowledge (Davenport and Prusak, 1998; Empson, 2001; Kankanhalli et al., 2005; Gray, 2001). It is basically the preference of self-interest over group interest. The

previous assertion is closely linked to one of the GLOBE dimensions called Humane Orientation (Cheng and Hitt, 2004). For example, people with high humane orientation care about the interests of others, whereas people with low humane orientation put their self-interest first. Filius et al., (2000) suggest that within the work setting, it was found that such behavior is explained by the fact that many experienced employees do not want to give up their own positions. In addition, Empson (2001) argues that people tend to fear sharing their knowledge because they want to avoid uncertainty, a cultural characteristic which is rooted to some extent in the individual's national culture.

**Proposition 8:** A humane orientation is expected to be related to loss of knowledge power (Cheng and Hitt, 2004)

**H8:**

**H0:** Low humane orientation cultures will show the same perception of loss of knowledge power compared to high humane orientation cultures

**HA:** Low humane orientation cultures will positively relate to higher perceived loss of knowledge power than high humane orientation cultures

**Proposition 9:** Uncertainty avoidance will directly influence loss of knowledge power (Empson, 2001)

**H9:**

**H0:** There is no positive relationship between uncertainty avoidance and knowledge ownership.

**HA:** There is a significant relationship between uncertainty avoidance and knowledge ownership.

Communication is an important factor that enhances KS the medium of communication through which knowledge is shared between people (O'Dell and Grayson, 1998) is an important consideration. Modes of communication have been studied in the research on NC. For example, Bhagat et al's (2002) study found that

collectivistic and individualistic perceive, process and construct information in different ways. For example, in individualistic cultures-such as the US- individuals prefer written information whereas individuals from collectivistic cultures- such as Russia- prefer contextual cues in information. This difference is a reflection of Hall's (1976) distinction between high- and low-context styles of communication. In high-context cultures, individuals look for the context of non-verbal actions such as in face-to-face communication or telephone calls. On the other hand, in low context cultures, individuals prefer the written word such as e-mails or on-line discussion boards (Ardichvili et al., 2006).

**Proposition 10:** A high context versus low context NC dimension is likely to relate to distinct preferences for the medium of communication to share knowledge (Ardichvili et al., 2006; Bhagat et al., 2002)

**H10a:**

**H0:** High context cultures are not likely to share knowledge any better in non-verbal modes of communication such as face-to-face and telephone.

**HA:** High context cultures are likely to share knowledge better in non-verbal modes of communication such as face- to-face and telephone.

**H10b:**

**H0b:** Low context cultures do not prefer to use the written mode of communication to share their knowledge

**HAb:** Low context cultures prefer to use the written mode of communication to share their knowledge

Analysis of prior research reveals that gender is influenced by subjective norms and behavioral intentions. Zakour (2004) study findings suggest that people in feminine cultures such as Norway, Netherlands and Sweden are expected to pay more attention to the opinions of others to perform KS. This customary behavior and preference leads to them being known for being people-oriented cultures. On the other hand, masculine cultures people such as Italy, Japan and Switzerland are expected to pay less attention to the opinions of others since they place high importance on goal

achievement and value material possessions. Zakour's study also found out that uncertainty avoidance, power distance and individualism versus collectivism have a direct impact on both subjective norms and behavioral intention. These dimensions of NC are considered to be the most important factors of KS that have been identified in the knowledge management research.

Proposition 11: Research studies show that subjective norms have a direct influence on sharing knowledge (Ajzen, 1991; Bock et al., 2005; Chatzoglou and Vraimaki, 2009; Moss, 2008). In relation to national culture, it is theorized that feminine versus masculine NC dimension will impact on subjective norms (Zakour, 2004)

**H11:**

**H0:** People in feminine cultures more not affected by subjective norms than people in masculine cultures.

**HA:** People in feminine cultures more affected by subjective norms than people in masculine cultures.

**H12:**

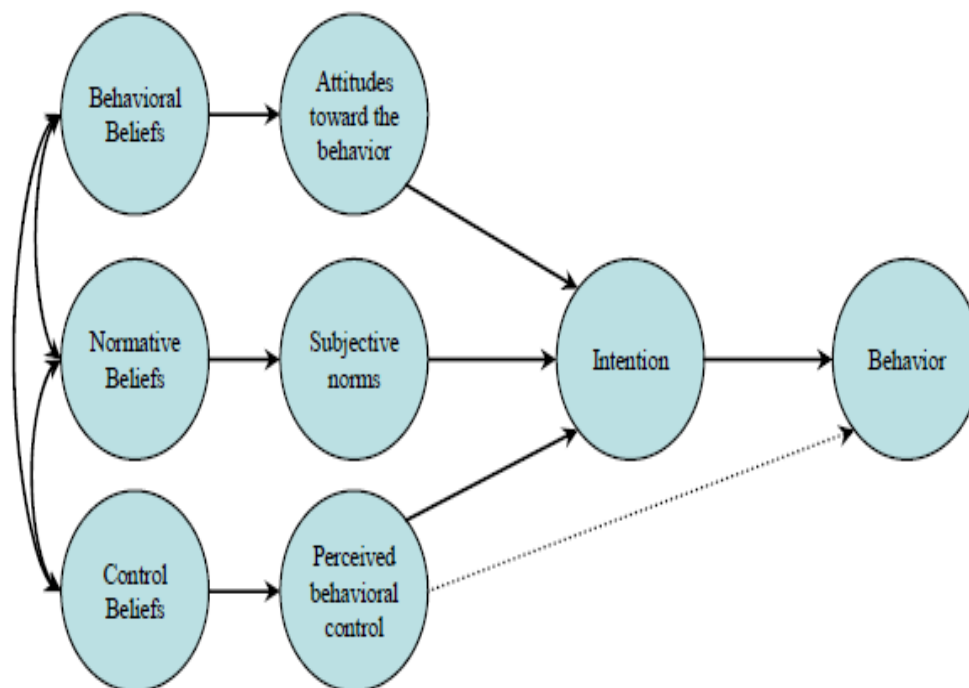
**H0:** People in feminine cultures are not more affected by behavioural intentions than people in masculine cultures

**HA:** People in feminine cultures are more affected by behavioural intentions than people in masculine cultures



### 2.2.3.8 The Theory of Planned Behavior- TPB and Knowledge Sharing

The theory of planned behavior (TPB) was introduced by Ajzen in 1985. In essence, the theory is considered as an extension the Theory of Reasoned Action (TRA) which was developed by Ajzen and Fishbein in 1975. TRA includes three major components namely: Attitude, subjective norm and motivation or intention. Perceived behavioral control has been added as an additional component and the theory was later been renamed as TPB (Chen, 2007). The last component has been added to the theory because TRA failed to explain individuals' behavior when they have incomplete volitional control. "TPB posits that individuals' behavior is determined by behavioral intention and perceived behavioral control. Behavioral intention is determined by attitude toward behavior (ATT), subjective norm (SN), and perceived behavioral control (PBC)" (Chen et al., 2009, p.135). In a simpler form of explanation, TPB emphasizes that individuals' behavior is controlled by sense of control, social pressures and personal attitudes. Each of the TPB components along with the effects of behavior on the antecedent variables is explained below and illustrated in Figure 3.



**Figure 3: The Theory of Planned Behavior**

(Source: derived from Ajzen, 1991, p.182)

With reference to Figure 3, the primary determinant of an individual's behavioral actions is intention. Intention refers to the extent that the individual is ready to engage in certain behavior and it is considered as an immediate antecedent of behavior. Intentions reflect three motivationally independent determinants, attitude toward behavior, subjective norms, and perceived behavioral control. Each of these variables and their antecedents is explained below:

1. Attitude toward behavior: It is primary based on behavioral beliefs. These beliefs refer to the expected consequences of a specified behavior and the favorable or unfavorable evaluation or appraisal of these consequences.
2. Subjective norms: It is based on normative beliefs. Normative beliefs refer to the perceived social pressure to perform (or not) a particular behavior.
3. Perceived behavioral control: Originally this concept is a replication of what is called self-efficacy which derives from social cognitive theory developed by Bandura in 1977. Self-efficacy refers to the individual's confidence about his/her own ability to perform a behavior. Similarly, perceived behavioral control refers to what extent the individual's perception about how difficult or easy it is to perform a certain behavior. It is also assumed that perceived behavioral control is based on control beliefs. Control beliefs are an individual's beliefs about the presence of factors that could encourage or discourage performance of the behavior. Perceived behavioral control is expected to increase intention because people are motivated to perform tasks that they can accomplish successfully (Ajzen, 1991).

Ajzen (1991, p.10) pointed out: "As a general rule, the more favorable the attitude and subjective norm with respect to a behavior, and the greater the perceived behavioral control, the stronger should be an individual's intention to perform the behavior under consideration". Similarly, when the person believes that a certain behavior is under his/her personal control, he/she is likely to intend to hold on to this behavior and to perform it (O'Connor and Armitage, 2003). However, research has acknowledged that attitudes, social norms, and perceived behavioral control are different from one person to another and from one culture to another. For instance, the subjective norms are expected to have less influence on intentions and behaviors in individualistic cultures than collectivist cultures (Moss, 2008).

Previous literature notes that KS is an intentional behavior. TPB is considered as the most influential of the available theories for explaining and predicting behavior in a certain context (Sheppard et al., 1988). For example, Beck and Ajzen (1991) used it to predict dishonest actions, whereas Moan and Rise (2005) used it to predict student's intention to quit smoking. Chen (2007) has used it to investigate and predict the behavioral intention of in-service Taiwanese kindergarten teachers regarding whether or not they would join a graduate level academic program.

In addition, the theory has been used in project management. For example, a study conducted by Hill and his co-workers in 1996 aimed to examine the impact of attitude, subjective norm and self-efficacy on intention to benchmark between managers with experience and with no experience of benchmarking. Another study used the TPB by surveying 149 employees to investigate their intentions to support organizational change (Jimmieson et al., 2008). A study conducted in a telecommunications company with 127 managers using the TPB to understand managers' intentions to improve their skills following subordinate feedback (Maurer and Palmer, 1999).

In addition, TPB have been used widely in cross-cultural studies (eg Bagozzi et al. 2001; Hagger et al. 2007). Likewise, KS has been studied using the theory of planned behavior (Bock et al., 2005; Cabrera and Cabrera, 2005; Fishbein, and Ajzen, 1981; So and Bolloju, 2005).

## **2.3 Global organization management**

The rapid economic development of multinational enterprises in the global era and their dominant share of the world's economic structure and wealth have attracted the attention of many international business and project management researchers. In addition, their rapid development has empowered them with more opportunities to develop and enhance their own economic position, whereas the other non-MNCs are unable to explore their potential as a result of an absence of adequate capital, lack of human expertise, unsuitable strategy and lack of innovative approaches. With the emergence of globalization, the management of MNCs' operations becomes more

integrated and interdependent which allows them to innovate more rapidly. The academic and practitioner concepts of global organization management are linked with these massive developments and seek to explain the stimulation of worldwide innovation (Bartlett and Ghoshal, 1990a; Rugman and Verbeke, 2003; Taggart, 1998).

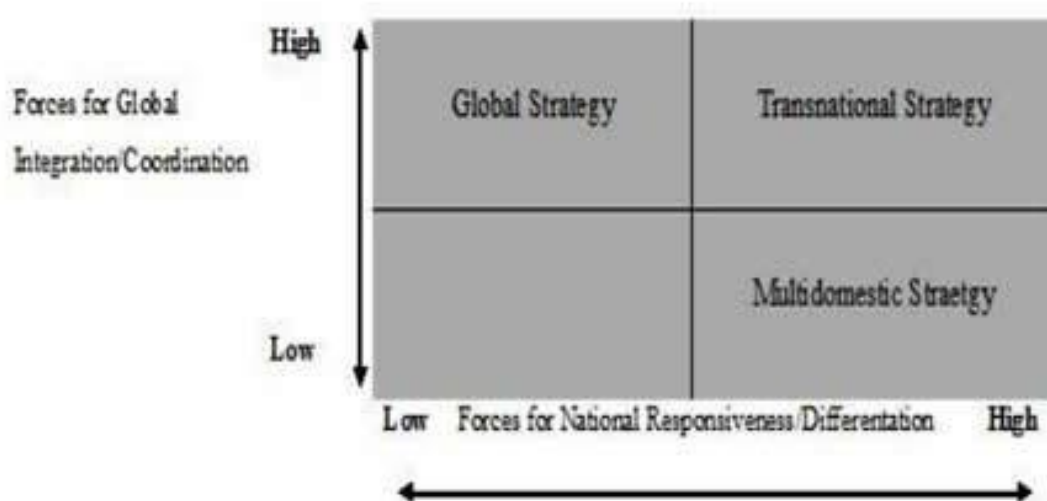
In fact, the rapid development of the world economy in recent decades has distracted attention away from investigating related issues of managing traditional organizations. Instead, an emerging and growing stream of scholars has become interested in the subject global organization management. Bartlett and Ghoshal are considered to be two of the main contributors to this field the enriching international business literature. This section of the present chapter, therefore, aims to review some relevant theories and arguments on global organization management based chiefly on the work of Bartlett and Ghoshal. In addition, it will specifically examine the development of the ideas of global organization management, pursuing two main components. One concerns the strategies to manage global organizations based on Bartlett and Ghoshal's typology while the second concerns the management challenges associated with managing global organizations and the required processes and strategies needed in order to stay competitive in the boundaryless economy.

### **2.3.1 Bartlett and Ghoshal's typology**

The emergence of fierce global competition has increased the pressure on organizations that are operating in international markets to integrate globally and respond to the needs of country markets. Using a case study approach, Bartlett and Ghoshal have developed a framework in which nine organizations from three different countries operating in three global industries were chosen for empirical study. A mixed methods approach including both in-depth interviews and survey questionnaires was used to gain a richer understanding of different types of organizations operating globally and identify the most favorable strategy for each. The main objective of this framework could be summarized in to three points. One is to enable the organization to select the most suitable strategic model which is linked to its capabilities and two to empower the organization to choose best tactics to ensure global competitiveness. Third, this framework can act as a valuable tool to assist

senior management with identifying the factors that push their organization towards better responsiveness and differentiation or global integration (Bartlett and Ghoshal, 1998).

With reference to Figure 4, there are two major components on which the typology was based. First, the global integration orientation enables the organization to respond to global needs. Bartlett and Ghoshal (1998) identified the second component "national responsiveness/ differentiation" as the extent to which subsidiaries respond to local market needs. Four distinct organization models and strategies were from the study namely: multinational, global, international, and transnational corporations which are described below.



**Figure 4: Bartlett and Ghoshal typology**

(Source: Bartlett and Ghoshal, 1998, p.28)

1. *Multidomestic/ (multinational)*, organizations are categorized as facing low pressure for integration and high pressure for differentiation. The most suitable strategy for this type of organization is to be responsive to local market needs. The organization's products and services are customized to each local market. Therefore, most of the strategic decisions are unique to each

country in order to satisfy the local market conditions and to ensure domestic competitiveness. Bartlett and Ghoshal have classified the structure of this type of organizations as decentralized and loosely coupled which means that there is no direct relationship between the subsidiaries and their headquarters. This structure's segmentation is hypothesized to result in a flow of information, people and products which is low. In addition, a low level of innovation is easily observed in such organizations due to lack of KS (Bartlett and Ghoshal, 1987 and 1998). Bartlett and Ghoshal (1987) argue that in the light of globalization, localization of the organization is too expensive compared to globalization. For example, developing and marketing new products are cheaper when the organization does it on a global rather than a local scale. Conversely, this form of organization is appropriate in so far as there are services and products that the MNC is required to accommodate to local policies, locations customers and habits.

2. *International organizations* are typified by facing both low pressure for integration and differentiation. The strategic decisions and the core competences are mainly based at the headquarters. The best strategy for such organizations is to invest heavily in the home country staff especially expertise since the whole value chain of the organization is based on the headquarters. The international strategy's main objective is to transfer the required knowledge and capabilities from the headquarter's expertise to its foreign markets. Unlike, multi-domestic organizations, the flow of information, people and products is higher and more efficient since the control processes are centralized.
3. *Global organizations* are seen as having high pressure for integration and low pressure for differentiation. To some extent the way that global organization works is very similar to international organizations. However, in global organizations the required strategy is based on massive scale economies and a high level of efficiency is needed to run the international operations. Also, in contrast to multi-domestic organizations the focus has to shift to global customers' needs and tastes rather than local customers' needs and tastes in order to exploit the integrated global market. Cost advantages, innovation and

effectiveness is what this strategy should focus on. The decisions should be strategic and well centralized. Integration and diffusion with the subsidiaries is important to ensure the maximum level of innovation and maintain competitive advantage. Thus, a high level of flexibility and adoption of knowledge, policies, practices, processes, products and services is required to run global operations (Bartlett and Ghoshal, 1987 and 1998).

4. *Transnational organizations* are classified as having high pressure for integration and high pressure for differentiation. The best strategy for these organizations is to focus on both maximizing local responsiveness and global integration. The headquarters organization of the transnational type should act as a network for its subsidiaries. Thus, a high level of flexibility and adoption is required to run international operations. Transnational organizations are a hybrid of global and multi-domestic organizations. Thus, a unique set of features will exist in this type of strategy such as development and maintenance of an integrated and interdependent network. In addition, the subsidiaries will have an effective role at both subsidiary and headquarter's level and therefore are required to play a strategic role. When such a combination exists, it has been suggested by Bartlett and Ghoshal that the flow of information, people, products and services are at their highest level of effectiveness. In addition, taking into the consideration the high involvement of subsidiaries, KS and innovation are expected to be high (Bartlett and Ghoshal, 1987, 1998).

### **2.3.2 Management challenges associated with managing global organization**

Bartlett and Ghoshal argue in their paper titled, "Tap your subsidiaries for global reach" that many organizations which were predominant during the mid-late 1970s have since lost their legacy to innovate due to their inability to capitalize globally. For example, a U.K.-based Company called EMI was unable to compete globally since the mid-1970s due to its inability to forecast the future needs of global markets.

The lack of global strategy and failure to realize organizational capabilities are major obstacles to global expansion. The dilemma of lack of knowledge in how global

strategy operates may be resolved by applying the Bartlett and Ghoshal typology and framework discussed above.

Bartlett and Ghoshal (1987) point out that an organization's strategic plans take less time and effort to implement successfully when its organization form is suited to its environment and is more straightforward than compared to restructuring the whole organization's capability. Organizational capability is very complex when it comes to change because it is linked to several factors such as configuration of organizational assets, distribution of managerial responsibilities, organizational culture, national culture, history, management style, people and relationships. All of these factors fall under one umbrella called "administrative heritage". Any organization needs to acknowledge the importance of its "administrative heritage" because it can act either as a great organizational asset or as a major obstacle to change. Thus, changing the administrative heritage is not an easy task and it will require more effort than establishing and maintaining a global strategy. Bartlett and Ghoshal (1998) argue that organizations need to spend so much time to understand all the aspects of their administrative heritage and potential capabilities. In addition, they assert that senior management should build up the organization's administrative heritage rather than trying to find an ideal organizational structure. The role of management motivation is a critical factor to enhance people's capabilities to change and empower them to contribute to the strategy of the organization (Bartlett and Ghoshal, 1990b).

With the emergence of globalization, the term transnational capabilities has replaced organizational capability to some extent. Transnational capabilities are "the ability to manage across national boundaries, retaining local flexibility while achieving global integration" (Bartlett and Ghoshal, 1998, p.13). In other words, being able to work locally and act globally. They state that in order for any organization to act globally it should first improve and build on its own capabilities. When an organization is re-thinking about its traditional strategies and capabilities, the change should not be sudden. Rather, a gradual improvement in the organization's capabilities will prepare it to develop more transnational capabilities.

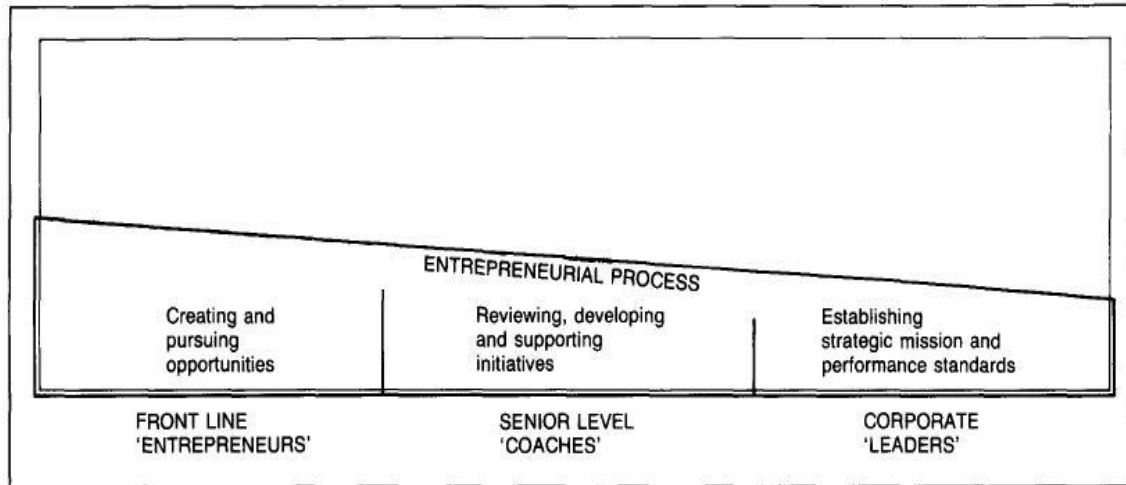


Bartlett and Ghoshal argue that purpose, process and people are the three components that senior management should focus on most when thinking about change. Unfortunately, many senior managers in different organizations focus on strategy, structure and systems alone more than the previously mentioned components. The latter components might have been suitable in the pre- and post-World War II eras when discipline and control was felt to have been more of a necessity in dealing with the external political environment. However, in today's global times these techniques of coordination and control are no longer sufficient to achieve global business competitiveness. Indeed, focusing on people, purpose and process could create a strong organizational commitment where the organization's employees will be empowered to take their own decisions and contribute positively and productively to the organization. This does not mean that strategy, structure and systems should be neglected but they should support the purpose, process and people components. Thus, human skills, knowledge, creativity and entrepreneurship become the most important elements that senior management should pay attention to when managing the organization. The overall advice is that they should build a system which is based on purpose, process and people rather than strategy-structure-systems management in order to compete with globalized businesses (Bartlett and Ghoshal, 1995a, 1995b, 1997).

Due to rapid changes of business environment Bartlett and Ghoshal (1997) argue in their paper "The myth of the generic manager: new personal competencies for new management roles" that the historic "Russian doll model of management" where managers at each level are expected to have the same roles and responsibilities is no longer applicable. The organization mindset has shifted from capital investment to knowledge acquisition. Dependency and interdependency in the organization processes has forced changes to the roles of the management and stimulated the emergence of new personal competencies. Therefore, global managers play different roles at different levels of the organization.

The shift towards a focus on competency-based strategies depends on people becoming key to ensuring global competitiveness. Focusing on knowledge acquisition, building learning processes and relationships based on mutual trust become the replacement for a bureaucratic organizational philosophy (Bartlett and Ghoshal, 1987; 2002). Changing the mindset of the senior management can be summarized into three major points. First, a changing view of strategic resources. The strategic resources should be shifted from focusing exclusively on capital to capital and human resources. Thus, the role of human resource management is profound in this stage as it evolves redesigning strategic human resource selection and reform of the rewards system. Second, there must be a changed view of value. The senior management should create a mindset of value based on knowledge creation and sharing. Third, there should be a change viewpoint on the roles of senior management. This includes understanding the organization's purpose, processes and people as all combined in one (Bartlett and Ghoshal, 2000a)

The arguments of Bartlett and Ghoshal (1995a) assert that bureaucratic organizations are no longer sufficient to adapt to globalizing markets and their evolving technologies. Instead, new organizational processes and new managerial tasks are required that are categorized by openness, freedom, and KS and continuous renewal. Bartlett and Ghoshal (1995a) argue that the massive success of companies like GE, ABB and Toyota are credited with the rejection of the multi-divisional doctrine and advocating adoption of new organizational processes and new managerial tasks. The main processes and roles of management are described briefly in the following paragraphs.



**Figure 5: The Entrepreneurial Process: Management Roles and Tasks**

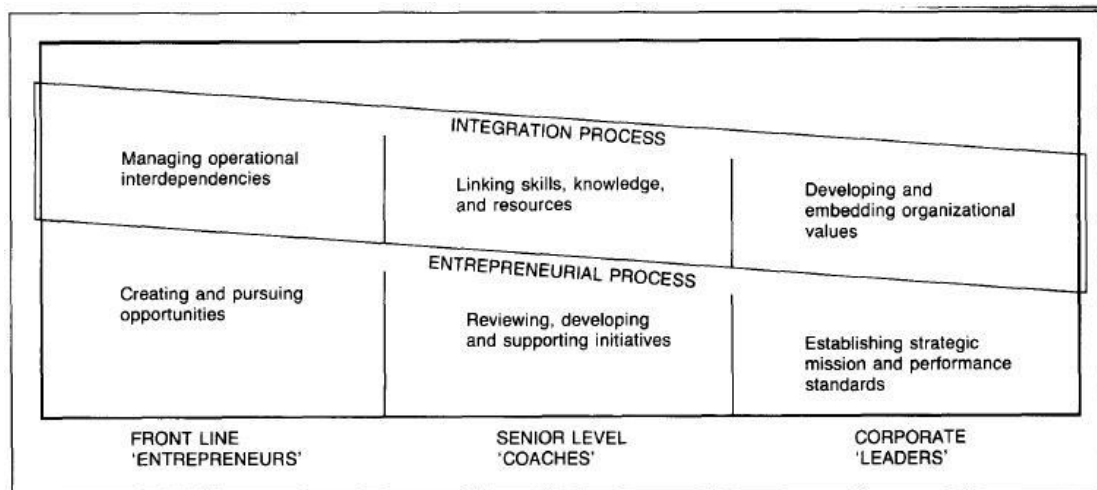
(Source: Bartlett and Ghoshal, 1995b, p.8)

*Process one:* Entrepreneurial process (supporting and aligning initiatives). With reference to Figure 5 there are three main players, namely, Front line “Entrepreneurs”, senior level “Coaches” and Corporate “Leaders”. In this process, a set of relationships are established. The front line should create and innovate based on new ideas. Freedom is required to promote the employee's sense of ownership. Freedom is linked to motivation because it allows the employee to express his/her own ideas at work. In this stage of the process, the employees should be allowed to decide what to do and how to carry out a certain programme of work/project. This enables the employee to have a sense of control over his/her work and thus motivates him/her to be more entrepreneurial in his/her work.

Senior level “Coaches” should be supportive and open to the front line “Entrepreneurs”. In addition, it is very important that coaches provide entrepreneurs with good planning, setting objectives, positive feedback, open communication, decentralized operations and enthusiastic support. Within the context of project management, coaches are the project managers. Coaches should be a good role model for entrepreneurs, appreciate entrepreneur’s initiatives and involve them in making decisions. Bartlett and Ghoshal (2002) argue in their paper entitled "Building Competitive Advantage through People", that managers should explore the strengths of their talented people and support their efforts. The role of Corporate “Leaders” is

unique in this way of managing the organization. They should establish the strategic mission of the organization and also supervise entrepreneurs to ensure that they are achieving the strategy based on their entrepreneurial work initiatives.

*Process Two: Integrative* (linking and leveraging competence). This is considered as the next level of entrepreneurial process because entrepreneurial process itself is not enough to achieve corporate entrepreneurship. The management has critical tasks to be achieved in this stage. They should first link the organization's assets and resources to corporate competences. And then, they should integrate these competences to obtain new opportunities. The role of each of the players "Entrepreneurs", Senior level "Coaches" and Corporate "Leaders" is mentioned in Figure 6.

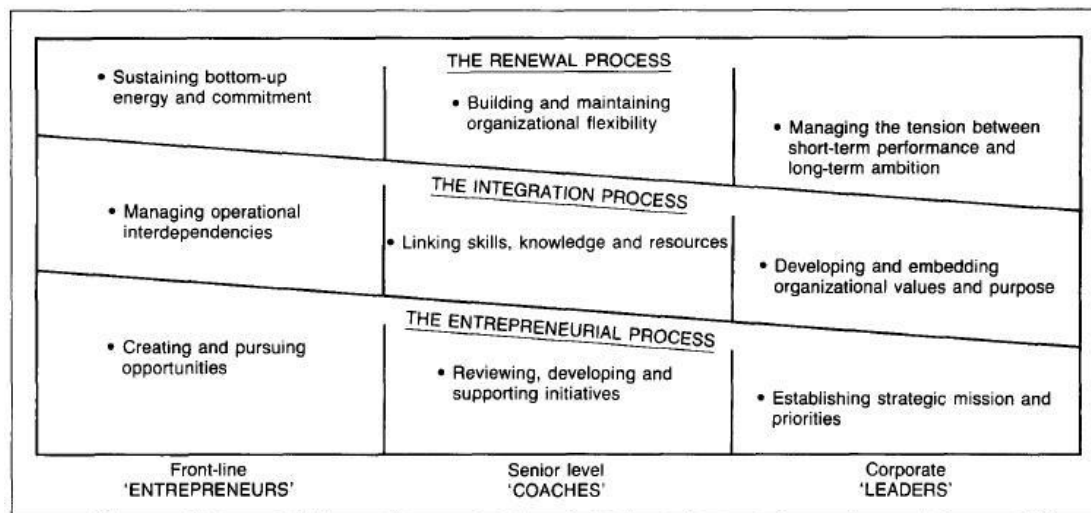


**Figure 6 : The Integration Process: Management Roles and Tasks**

(Source: Bartlett and Ghoshal, 1995b, p.11)

Process Three: Renewal (managing rationalization and revitalization). Once the two first processes are established, renewal mechanisms are needed to be in place in order to keep the spirit of entrepreneurship alive. Bartlett and Ghoshal (1995b) state that renewal is based on two main concepts, first, is rationalization which is mainly based on the effective usage of the resources. In this stage, the management should allocate and reallocate the resources to make the best investment decisions. Effective usage of resources allows the senior management to manage and monitor available resources to the right projects. This can act as a method and tool for selecting the right mixture of project types. Therefore, the authors propose that this will boost organizational

competitive advantage. The second concept is revitalization which is an ongoing search for new competencies and business ideas. In this stage the entrepreneurs have established a sense of commitment and the coaches' main role is to sustain organizational flexibility.



**Figure 7: The Renewal Process: Management Roles and Tasks**

(Source: Bartlett and Ghoshal, 1995b, p.15)

With reference to the previous three figures 5, 6 and 7, it is apparent that the organizational processes are complex in order to adapt to the external demands and changes. These processes become more complicated once we move one layer up which also require new managerial tasks in each of these processes. It should be noticed that these processes are built on each other and not separated. The managerial tasks are evolving over these processes and thus rapid improvement of skills is required in each of these process stages. In addition, new sets of relationships are created in each of these processes. These relationships should be based on mutual understanding, openness and constructive judgment of ideas. The role of change management is vital to be understood by all the managerial levels including entrepreneurs especially in the last stage of the process as new set of roles, structure and culture might be needed to rationalize and revitalize the organization. All the previously mentioned processes are required in order for any organization to be globally distinguished. Bartlett and Ghoshal (2000b) argue in their paper entitled

"Going Global: Lessons from Late Movers" that having the right staff is the key to the global business. They place great emphasis on the role of global leadership in guiding the organization on its global journey.

To summarize, this section has introduced the concept of global organization management. It also presented suitable strategies for managing global organizations based on Bartlett and Ghoshal's typology of multinational, global, international, and transnational corporations. In addition, it discussed possible challenges and prospects for the management of global organizations. Finally, it summarized the main processes, entrepreneurial, integrative and renewal, and outlined their appropriate leadership and management.

### **2.3.3 Global project management**

This section reviews the theoretical background of global project management. Before proceeding to the next chapter, it is necessary to define the term 'global projects' that is used in this research. Thus, this section discusses and evaluates the origins of the definition of global projects. In this endeavour, project management and knowledge management approaches were chosen. This section then explores the importance of global projects and identifies some of the main challenges in managing these projects. It also compares global organization management with global project management. The chapter ends with an overview of BankCo's global projects.

### **2.3.4 Typology of projects**

A typology of projects can be identified representing different types of development of project management and project management processes. Different methods and perspectives have been formulated to distinguish between different types of projects. For example, Turner and Cochrane (1993) classified projects based on the projects' goals and the required tools to achieve them. Others have classified projects differently based on certain traits, such as virtual and non-virtual projects (Evaristo and Fenema, 1999); achieved results or deliverables (Youker, 2002); the extent of

hardness or softness of projects (Crawford and Pollack, 2004); and the technical and cultural dimensions of projects (Turner, 1999).

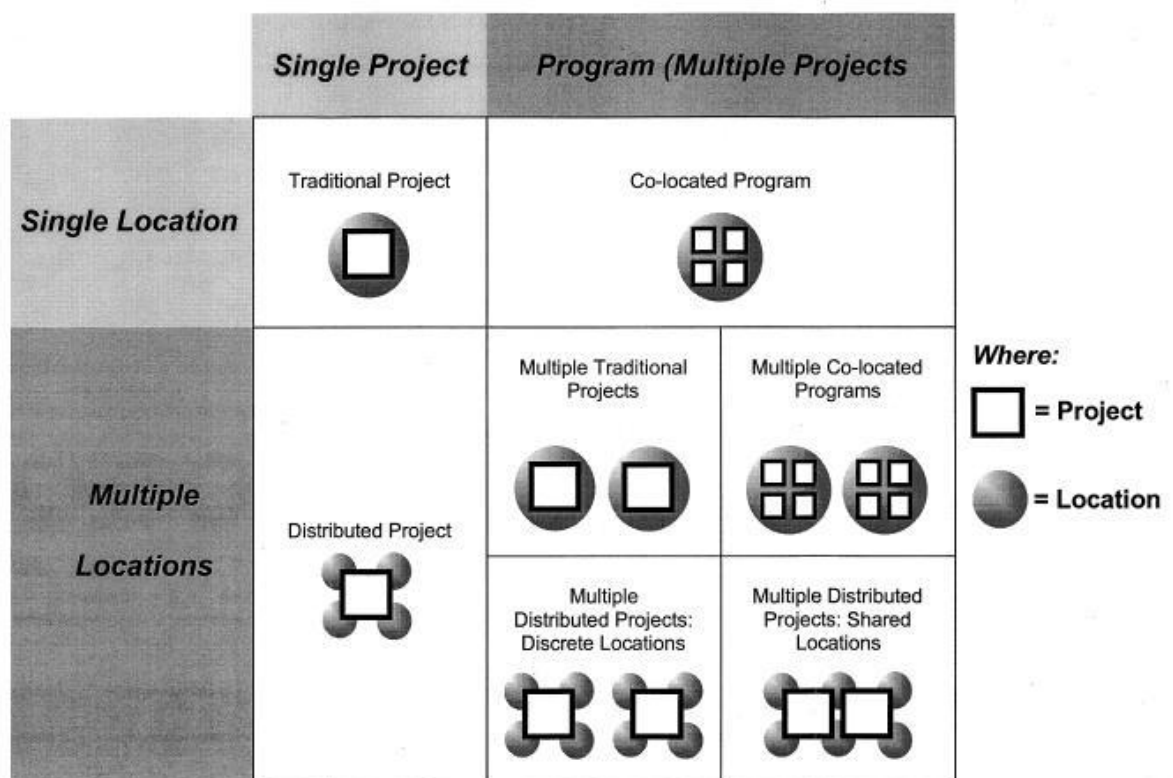
With reference to the project management literature, a large portion of projects are classified either into single or multiple projects (Wateridge, 1995; Payne, 1995; Van Der Merwe, 1997). The only difference between the two is that single projects take place in a single location while multiple projects are mostly located on multiple sites (Van Der Merwe, 1997).

Recently, project management research has shown a growing interest in managing international teams with cultural differences (Schneider, 1995; Egginton, 1996). However, the studies of Schneider (1995) and Egginton (1996) failed to address the subject of managing projects on multiple sites. The development of the new economy market suggests that this new form of projects has emerged but they do not belong to either the single or multiple projects type. For example, Kumar and Willcocks (1996) have studied software development project by case study in which the client was based in the US whereas the project's developers were based in India. It could be argued that the project did share the same objectives however it certainly did not share the same single geographical location. In this case, the project type does not fall neatly under the categorization of a single project or multiple projects.

### **2.3.5 Typology of new project management forms**

Traditionally, project management research has shown a great deal of interest in managing projects on a single location whether in one organization or more. However, other recent strands of the literature have treated the previously mentioned focus of research as uncompetitive for new global arena. Indeed, other types of projects have emerged and recently have received more attention such as global projects. This may be attributed to the evolution of the market situation, nature of the business, IT advancement, the project's nature, and organization's culture. The following paragraphs attempt briefly to introduce global projects from both the project management and knowledge management perspectives, as well as discuss some relevant theories that will help to understand how global projects have developed and performed.

Evaristo and Fenema (1999) proposed a componential framework for understanding project classifications. With reference to Figure 8, two major dimensions are used to classify internal projects: (a) the number of projects—single or multiple, and (b) the number of locations—single or multiple sites. Within the context of this componential framework, a project is defined as a unique endeavour, a special task that has not been done before, whereas the site or the location is defined as a physical location or locations.



**Figure 8: Project management typology**

(Source: Evaristo and Fenema, 1999, p.277)

Inspection of Figure 8 shows seven types of projects are represented as follows:

- 1) *Traditional Project* (single project, single location): The most common project type.
- 2) *Co-located program in single location*: Are multiple parallel projects which are operated co-located in a single location and is classified under the



traditional scheme. This type of project is very similar to program management. Turner and Speiser (1992, p.199) define program management as “the process of coordinating the management, support and setting of priorities on individual projects, to deliver additional benefits and to meet changing business needs”. These types of projects might be interdependent in which they share the same objectives, information, resources, technology and similar deliverables. Van Der Merwe (1997) argues that a key challenge in this type of project is to manage the resources across the projects. It could be argued that project portfolio management-PPM is a necessity for this type. Indeed, PPM practices intend to align the projects to the organizational strategy, maximize the value of the portfolio through allocating and reallocating the resources for obtaining the best investment decisions, and balancing the whole portfolio of projects (Cooper et al., 2001; Kamm, 1986; Teece et al., 1997).

- 3) *Multiple co-located programs in multiple locations*: A set of projects that are operated in different locations. This type of program of projects is very difficult to handle because many issues might arise such as non-existence of face-to-face communication, coordination problems, lack of sufficient planning and most importantly, difficulty in allocating and reallocating resources in different locations (Evaristo and Fenema, 1999).
- 4) *Multiple traditional projects*: This category of project type is similar to multiple co-located programs. However, it operates only in one single geographical location. The major issues that multiple co-located programs are likely to face do not exist in this type with the exception of planning difficulties and especially scheduling problems (Evaristo and Fenema, 1999).
- 5) *Distributed projects*. This type is a single project that includes a number of locations. The coordination, planning and communication are done mainly by multiple project managers. Theoretically, a project manager is appointed for each location (Evaristo and Fenema, 1999). Distributed projects are also called international projects and global projects because they involve people working in a same project but across different country borders. It is considered as the most complex type of project (Evaristo, 2001).

- 6) *Multiple distributed projects: discrete locations*. This is a subset of the distributed projects. However they are handled by a single project manager which can make the task more difficult to cope with (Evaristo and Fenema, 1999).
- 7) *Multiple distributed projects: shared locations*. This is very similar to multiple distributed projects: discrete locations. However, the only difference is that they are using shared location which makes the coordination, planning and resource allocation less complex than the previous type (Evaristo and Fenema, 1999).

Given the above project typology, it is apparent that project complexity and challenges do increase mostly in multiple projects more so than in a single project in one location although a single project in multiple locations often is more complex. However, managing multiple projects in multiple locations creates the most difficult task for project management. This framework is beneficial for understanding the major issues and suitable project management techniques that should be considered. Although this model takes different types of project within the organization into account, projects within or crossing organizational lines is neglected in the framework.

Evaristo and Fenema's (1999) model is criticized on theoretical grounds in the light of the globalization perspective. From a theoretical point of view, globalization forces the organization to go beyond its boundaries. Empirically, most of the recent studies have studied the project beyond the boundaries of the organization (Katzy et al., 2000; Mahalingam and Levitt, 2007; Van Der Merwe, 1997; Yasin et al., 2000; Youker, 1999). A number of researchers have, therefore, questioned the ability of Evaristo and Fenema's (1999) model to explain the complexity of going beyond the organization boundaries, observing that the model failed to present an adequate explanation of the issues that cross-organizational boundary project management may encounter. This failure has prompted researchers to develop models that are more able to explain the issues that go beyond organization boundaries (Katzy et al., 2000).

The Katzy et al.'s (2000) model is an extension of the Evaristo and Fenema (1999) framework and seeks to explain different types of projects across organizations based on a knowledge management perspective. Katzy et al., (2000) included the concept of affiliation dispersion. Two major dimensions are explored in their framework in order to classify the projects. First is the extent to which team members are physically discrete, and second the extent to which the organizational affiliation of team members is dispersed. The characterizations of the projects are based on low or high dispersion in geography and team member affiliation. With reference to Figure 9, four major types are identified as follows:

		<b>Geographic Dispersion of Team Members</b>	
		<i>Low</i>	<i>High</i>
<b>Affiliation Dispersion of Team Members</b>	<i>Low</i>	Traditional	Distributed
	<i>High</i>	Inter-organizational	Virtual

**Figure 9: A Typology of Projects Across Organizations**

(Source: Katzy et al., 2000, p.7)

(1) *Traditional*: A project exists in a single location and has teams from a single organization. Thus, the complexities in this type are low in term of affiliation. Resource management, task planning, management styles and coordination are the major issues that need to be handled in this type (Katzy et al., 2000; Munns and Bjeirmi., 1996; Ven der Merwe, 1997).

(2) *Distributed projects*: The organization might move from managing traditional to distributed projects for two major reasons: (a) The development of IT and communication technologies, and (b) Physical dispersion of the organization's workforce. Referring to Figure 8, affiliation is still low. This could be attributed to the fact that the team members are from the same organization. Communicating distributed information, new system of work practices, effective coordination are some of the challenges that might face this type of the projects (Katzy et al., 2000).

(3) *Inter-organizational projects*: Projects in which two or more organizations are involved. Team members who are involved in this type of projects are not geographically very distant. The issues that might face this type of the projects are very similar to those in traditional projects (Katzy et al., 2000). However, ownership of the final project and trust remain an issue for this type of project (Maurer, 2009; Teece, 1986).

(4) *Virtual project*: This type of project is the most complex type due to the high level of both affiliation and geographic dispersion. Katzy et al (2000) argue that this type of project may involve many issues that have been mentioned in the above three types, all combined. Complexities can be explained by the presence of multiple locations, multiple organizations, different team members, and different business units are involved in this type of project. In addition, multiple interdependencies may further increase the complexity as well. Thus, managing such a complex type of project is not an easy job to perform (Evaristo, 2001; Evaristo and Fenema, 1999)

To sum up, both of the frameworks have classified projects differently (within and across organizations). However, both frameworks seem to display a similar result: the distributed projects and virtual projects are the most complex project type. It is apparent that the second model and approach is more useful for understanding global projects, and offers a more profitable area for future research.

Throughout the project management literature, global projects, international projects, virtual projects and transactional projects all refer to the same cluster of concepts and similar characteristics such as geographical distance, serving single project objectives, achieving short-time duration projects, and communicating mainly virtually or by

advanced global diffusion of information and communication technologies (ICTs). For the purpose of the research for this dissertation, we are concerned with organizations executing global projects. A comparison between traditional project and global project is presented in Table 11.

**Table 11: Traditional versus global project**

<b>Attributes</b>	<b>Traditional Project</b>	<b>Global Project</b>
<b>Location</b>	Single	Multiple
<b>Teams</b>	From a single organization	From different organizations mostly and sometimes from single organization
<b>Project's period</b>	Temporary	Temporary
<b>Time Zone</b>	Similar time-zone schedules	Different time-zone schedules
<b>Communication</b>	Face-to-face mostly	Virtual and face-to-face
<b>Project's complexity</b>	Low to high	High
<b>Size of project</b>	Small- big	Big
<b>Effects of relevant political, legal and economic conditions</b>	Low	Very high
<b>Level of technological advancement</b>	Low-medium	Very high
<b>Resource appraisal and allocation</b>	Distributed to a single location	Distributed to multiple locations

### **2.3.6 Definition of Key Terms–Global project management, global projects and global project manger definitions.**

Before proceeding to the next section, it is necessary to define the term ‘Global project’ that is used in this research. Global project is defined as transnational project, a limited time project in which individuals who are culturally diverse, geographically

dispersed working in different countries, diverse cultures, and having different first languages are working together in order to work on a similar mission (Adenfelt and Lagerstrom, 2006; Schweiger, 1998). Four main characteristics can be isolated within the definition 1) short project life cycle; 2) geographical distances; 3) serving a single task; and 4) diverse individuals. It should be acknowledged that the previous definition and characteristics share many attributes similar to virtual project/teams. For example, Vittal and Michael (2010, p.60) defined a global virtual teams as “.. a temporary, culturally diverse, geographically dispersed, electronically communicating work group”. There are some clear distinctions that can be made between global virtual projects and global projects. First is the method of communication. In most cases, virtual projects depend heavily if not entirely on virtual communication whereas global projects use a combination of virtual and non-virtual communication. Second, global projects must serve a single task or main objective whereas virtual projects can have multiple objectives.

Global project management includes requirements such as tools, people management, processes, organization structure and culture to manage global projects (Binder, 2007). A global project manager is very much linked to the concept of the global leader.

Misunderstandings arising from differing definitions of the ‘global leader’ can be attributed to two main reasons. The first is based on distinguishing global and democratic. Some of the homogeneous characteristics of the global leader, share close similarities with a democratic leader. Jokinen (2005) however, argues that a manager with domestic experience always fail to work in a global context. Osland et al. (2006) concluded from their extensive review related to global leadership that all of the studies have failed to distinguish between global leader and global manager. Jokinen (2005) argues that the global leader should be defined by position in the organization such as top management and CEOs, whereas a global manager is the person who has global competences and he/she is in charge of managing global projects. However, Evans, (2007) argues that the term global leader in this case is limited to a hierarchical position which means that it is too restricted since it fails to

consider global leadership by other managers and employees working in the organization.

The second considers the difference between leadership and management. It is acknowledged in the management literature that there is often some confusion between leadership and management (Kotter, 1990). However, the confusion created by failing to draw a clear distinction is possibly more of a problem for the global leadership literature. For example, in the management and organization studies literature, there is a clear classification made between global, international, multinational and transnational (Bartlett and Ghoshal, 1998) roles. Whereas, in global leadership literature less sharp distinction is made between them and instead the terms have been used more or less interchangeably. One explanation for this difference in approach could be that global leadership is associated with the management of people, tasks, process and projects.

Global leaders are often defined as high level executives who are responsible for carrying out their international assignments effectively in complex global environments (Spreitzer et al., 1997). Bartlett and Ghoshal (1992) categorized global leaders as people who have the ability to expand the organization's businesses across borders. Being able to develop and execute international strategies, monitoring global operations, and managing dispersed teams are all eligible criteria for global leaders. Thus, the author of this dissertation proposes that a global leader is defined [as "*a person who is competent to work on global tasks and lead people efficiently and effectively in a global environment irrespective of his/her hierarchical position*". It could then be taken as following this definition that a global project manager will be more or less similar to a global leader that the author has defined. A global project manager thus can be defined as "*a person who is competent to work on global tasks and lead people efficiently and effectively in a global environment irrespective of his/her hierarchical position and for the agreed duration of the project*". The only difference between the two is the first is associated with a long period of time whereas the second is a temporary and delegated role depending on the duration of the project. Thus, it is hypothesized by the author that the required competencies for both global leader and global project manager are in most respects similar.

### **2.3.7 The importance of global projects**

This type of project has received a great amount of attention recently especially from the project management professional community due to the fact that it requires dealing with different cultures, norms, languages, locations and countries. It also requires a great deal of attention from the organization in term of workplace practices, communication methods and organizations' structure (Binder, 2007).

Evaristo and Fenema (1999) argue that there are two fundamental reasons that explain the evolving trend in project types. First, the adoption of advanced Information and Communication Technologies (ICT) which allow the organizations to operate in distributed mode. For example, many organizations are using groupware and videoconferencing to facilitate global project operations. Second, in a global arena, many organizations are operating in complex and turbulent environments. Consequently, these organizations are striving to meet their customers' needs and to remain competitive in the market through introducing and managing innovative services and products. A key challenge for these organizations is to manage such global pressures through global cooperation. This cooperation not only requires people to work in geographically distributed locations, but, means people need to know how to lead and manage projects globally. These above factors are considered to have accelerated the use of global projects (Binder, 2007; Vittal and Michael, 2010).

Global projects represent a shift towards the new advanced economy and virtual workplace. Many organizations especially multinational firms have increased their economical wealth by working on a global scale that allows them to nurture their knowledge and save costs (Davenport and Pearlson, 1998; Gupta and Govindarajan, 1991). For example, Chiesa (1995) concludes based on his study that global projects are a fundamental tool to achieve competitive advantage and innovation especially in multinational enterprises (MNEs). In addition, managing global projects can act as a strong tool in attracting talented technical expertise from different part of the world (Sparrow and Daniels, 1999). Other benefits associated with global projects are

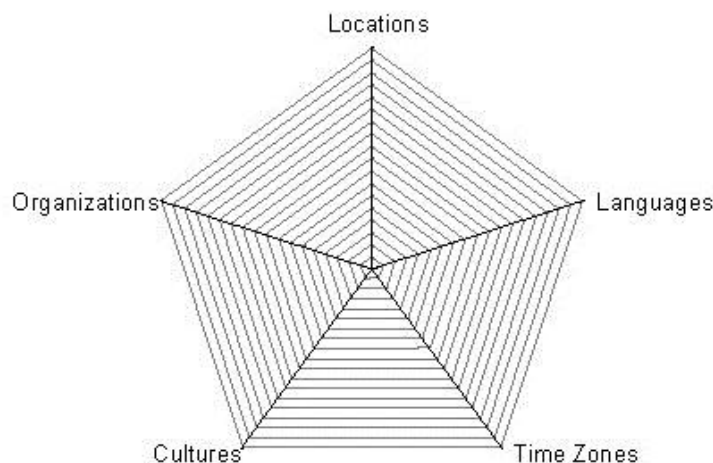


leveraging management skills, reducing the project's life cycle, enriching KS and unifying business operations and work practices (Eisenhardt and Tabrizi, 1995; Kay, 1998; Markus et al., 2000). In addition, global projects increase project team members' competency and work experience, acquire required resources from different sites, create synergy between team members and reduce cost (Chen et al., 2006).

### 2.3.8 Global projects challenges

Global projects are very complex, thus organizations may encounter many challenges. Researchers have argued that traditional project management practices are not adequate for running global projects due to their greater complexity. Indeed, managing global projects means managing in different locations, languages, time-zones, cultures, and organizations.

The challenges of global projects have been studied in-depth (Binder, 2007; Grosse, 2002; Mahalingam and Levitt, 2007; Nidiffer and Dolan, 2005, Vittal and Michael, 2010). Binder (2007) has proposed a “Global Project Management Framework” in which he explores the dimensions of global project challenges.



**Figure 10: Global Project Management Framework.**

(Source: Binder, 2007, p.3)

With reference to Figure 10 above, Binder identified five dimensions presenting them in a radial chart. The complexity of the global projects is increasing if we move from the center. Each dimension is explained in the below paragraphs:

- 1) *Cultures*: within the context of global projects, culture refers to the NCof the people involved in the project. People are expected to work in cross-cultural environments on global projects in which multiple benefits could be gained such as team diversity, rich knowledge transfer and exchange, increased productivity, improved collaborative group thinking and elevated motivation (Binder, 2007). On the other hand, the role of project managers is very critical in managing cross-cultural conflicts, communication, lack of planning and poor project execution (Vittal and Michael, 2010).
- 2) *Organizations*: the complexity of global projects increases by the number of organizations involved in the project. Dealing with multiple organizations means that the project manger needs to handle different organizational policies, procedures, practices and cultures (Binder, 2007). Thus, a project manager should have international experience in order to be able to manage large complex projects (Yasin et al., 2000).
- 3) *Locations*: locations refer to the number of distant locations involve in the global project. According to Binder (2007), the role of adopting an effective communication system or approach is very critical when two or more different locations are involved in global projects.
- 4) *Languages*: Members of global project teams often speak different first languages. This dimension is linked to the culture and organization. When managing global projects, many teams deal with each other across borders. However, not everyone speaks and understands a common language. Thus, exchanging information, knowledge, and effective communication becomes a challenge. Sarker and Sahay (2002) stated that in global environment projects, many individuals stick to their native languages which act as a barrier to share information and communication. The use of visual communication could be a tool to improve communication (Binder, 2007). Where the main concern of a project is human-orientated, the need for being sensitive to different cultures will be required (Grosse, 2002; Vittal and Michael, 2010; Yasin et al., 2000). In addition, attention should be paid to the work being produced by

subordinates; corrective action taken when needed and initiative taken when agreed standards have not been met.

- 5) *Time Zones*: the complexity of global projects increases when a number of time zones are involved. Most global projects teams work with different cross-border teams in different countries, so they should have to allow for different time zones (Binder, 2007). The role of planning ahead and having a standard communication guideline is very important. Nidiffer and Dolan (2005) point out that project managers can use time zone differences to increase productivity.

Other challenges have also been investigated. For example, establishing trust between global teams (Jarvenpaa and Leidner, 1999; Kanawattanachai and Yoo, 2002). Trust may be linked to the culture and to locations and time zones. Establishing trust is difficult where the most of the team's interactions are performed virtually. The role of effective leadership becomes critical in facilitating the development of trust such as enhancing open communication, having conference meetings and maintaining a clear vision about the work. This relates much to the tenets of Expectancy Theory where three factors are required to ensure a high level of motivation and thus a vision to understand the outcome of the work; expectancy, instrumentality and valence (Gray, 2001). Another challenge is planning. Researchers (Nidiffer and Dolan, 2005; Vittal and Michael, 2010) argue that most of global project planning issues are highly influenced by cultural differences. Stakeholders and customer satisfaction was identified as a challenge by Nidiffer and Dolan (2005) and Yasin et al., (2000). Keeping the stakeholder /customer informed and involving them throughout the whole process of the project is important to managing stakeholder and customer satisfaction.

Communication is also considered as a major opportunity and conversely a common obstacle to successful performance in global projects. Language and culture are associated with communication (Grosse, 2002; Sarker and Sahay, 2002; Yasin et al., 2000). Integration management was also identified by Nidiffer and Dolan (2005) and Yasin et al., (2000) as one of the major challenges in managing global projects.

Integration management refers to whether the organization is based on vertical or horizontal communication channels. For example, if two organizations are working in a global project where organization (a) is adopting a vertical integration management approach and organization (b) is using a horizontal integration management approach it become very difficult to integrate the project's activities. Other strands of the literature have highlighted legal and political issues such as country specific laws and procedures, environmental regulations and political instability as challenges associated with global projects (Vittal and Michael, 2010; Yasin et al, 2000).

### **2.3.9 Similarities and differences between global organization management and global project management**

It can be argued that a huge portion of global project management is related one way or another to global organization management. Many issues that could face global projects can also impact on global organizations. Change, is the first element common to both. In the case of global organization management, change and its management was identified as a main mover for any organization to be global. In the context of global project management, change is also needed to run projects differently from usual. However, the required scale of change to conduct global project management is not so massive as in global organization management. The whole organization needs to change its structure, strategy, processes, culture, and so on. However, global project management does not require such a high magnitude of change. Nevertheless, the complexity of global project management is often higher than many of the routine activities of global organization management. Managing global projects means managing different locations, languages, time-zones, cultures, and organizations whereas in global organizations the complexity is less because the organization already has policies and practices that cover all of these contingencies. Eriksson et al., (2000) argue that global organizations are managing mostly though traditional types of project which are likely less complex than global projects.

As was mentioned earlier on in this chapter, the role of establishing mutual trust becomes a replacement for management according to bureaucratic organizational philosophy (Bartlett and Ghoshal, 1987; 2002). In global project management, trust has been acknowledged to be central by many researchers and practitioners (e.g. Diallo and Thuillier, 2005; Jarvenpaa and Leidner, 1999; Kanawattanachai and Yoo, 2002). Therefore trust-building activities could prove beneficial. Notably, global leadership is likewise linked closely to the notion of trust. Leaders, for example, may demonstrate trust in their employees by allowing involvement in initial project discussions. They need not be involved in the final decision, but when they are involved in preliminary processes, their commitment towards the project would likely increase.

The role of global leadership is profound in both especially when managing cultural differences, collaboration and communication. In global organization management, leaders take various forms and can be found in an array of situations. In other words, the leaders can be commanding, cooperative, people-concerned, and/or task-concerned depending on the situation. Bartlett and Ghoshal (1998, 1992) claim that there should be a direct relationship between a leader and subordinate and argue that the behavioral experience of working together by providing a certain environment, understanding and clarification of the required work, can positively affect the subordinate's behavior to change and accept globalization. Beside this, global leadership is said to be categorized by openness, acceptance of new ideas and new ways of conducting business. Leaders can have the power to influence and change the fate of the whole organization due to their direct relationship with key people in the organization. The notion of global leadership has been linked to managing cultural differences and NC across borders. For example, the leader should be sensitive to cultural differences of the people he/she is working with. Being tolerant and understanding other people cultural difference could act as great competency for any organization that seeks to expand globally (Bartlett and Ghoshal 1998, 1992). The role of administrative heritage such as NC, values and so on is linked to this concept. In global project management, the role of global leadership is also similar to the above. The following leader criteria arguably are a similar necessity for both:

1. Cross cultural collaboration and communication

2. The ability of motivate and cooperate effectively with the people without using formal authority
3. The capability to share the project's /task vision
4. Building trust

However, the complexity of global leadership is higher in global project management as the global leader needs to interact with different organizations and countries (that often are more numerous than the global projects in the organization) in which management processes and decision making methods and behavior are unlike. Eriksson et al., (2000) propose that studying NC dimensions is the key to understanding variation, and positive and negative issues relating to difference.

Another common element is KS which is common to both literatures. KS is more complex in global project management than global organization management since the face-to face interaction is less and the NC variance is high.

**Table 12: Differences and similarities between global organization management and global project management**

Attributes	Global organization management	Global project management
<b>Similarities</b>		
<b>Hierarchy</b>	Ambiguous. Thus, coordination issues always encountered	Ambiguous. Thus, coordination issues always encountered
<b>Project/product</b>	Unique	Unique
<b>Physical Distance</b>	High especially geographical and time-zone	High especially geographical and time-zone
<b>Psychic Distance</b>	High including :linguistic, emotional, cultural, normative and regulative	High including :linguistic, emotional, cultural, normative and regulative
<b>Number of project managers per project</b>	The coordination, planning and communication are done mainly by multiple project managers	The coordination, planning and communication are done mainly by multiple project managers
<b>Teams</b>	Multicultural trend towards more use of self-managed teams	Multicultural trend towards more use of self-managed teams
<b>Differences</b>		
<b>Organizational structure</b>	Permanent	Temporary depend on the project
<b>Decision making</b>	Centralized: decision making should be held in a few key centers and decentralized	Decentralized: distributed to a large number of project managers
<b>Communication</b>	A combination of virtual and non-virtual. However, the formal and informal process is in place.	Mostly virtual.
<b>Leadership</b>	Strong control over internal administration and functions. However, a trend toward transformational leadership type is apparent	Weak control over internal administration and functions and strong control over the project planning, control and performance. However, a trend towards transformational leadership type is apparent
<b>Knowledge Sharing</b>	less complex	High complex
<b>Resource appraisal</b>	Resources are best allocated to best investment decisions (corporate level)	Resources are best allocated to according to the need of the project (project level)

### **2.3.10 Global project management and global projects–Literature Critics:**

No consensus has yet been reached in academia as to how ‘global projects’ should be explained, and the definitions that often appear in the field are vague and simplistic. Reviewing relevant research on global projects, most of the definitions are derived from virtual teams and virtual projects. There are some differences between traditional projects and global projects. However, the literature review has argued that there is no difference between virtual projects and global projects. It is apparent, for example, that both of them will lead a team that spans multiple countries and cultures. In addition, both of them are categorized by geographically-dispersed types of project. In addition, the challenges that have been identified in global projects are similar to the challenges that could be found in virtual projects or virtual teams such as culture differences, time zone, locations and communication. There are some important distinctions to be made between global organization management and global project management. As the former refers to the organization as the unit of analysis whereas the latter does not refer to an organization. However, the review of the literature did not find any major difference between managing global organization projects and managing global projects. This could be attributed to the heavy reliance on virtual work/teams/projects in the literature rather than attempts to characterize a new and distinct form of project.

Global projects and global project management can be heavily criticized on both theoretical and empirical grounds. Evaristo (2001) refers to distributed projects as global projects which raise the issue of whether it makes too many assumptions that are unrealistic from theoretical and practical perspectives. However, taking into the consideration, the similarities between the two, it is safe to assume that they mean the same in many important ways. Empirically, most of the global projects or global project management studies are based mainly on virtual teams/work (e.g. Binder, 2007; Vittal and Michael, 2010). Most of the tests of global projects are directly based on virtual teams and virtual work environments. The research work that has been published so far about global projects fails to present an adequate explanation of what makes global projects unique and distinct from many virtual projects. The question here is global projects are a new concept in project management or is it a combination



of virtual and traditional project components? This question remains open for discussion and is considered in this dissertation.

## **2.4 BankCo Case Study context**

### **2.4.1 Project management in banking industry**

In the past, senior management of the financial and banking institutions concentrated their executive attention on limited areas of management such as how to increase investments and how to control loans. Back then, the strategic and managerial decisions received comparatively little attention. However, the management of the banking industry and the nature of the business has changed especially since the introduction of globalization. The management was forced to think beyond generating revenues through traditional ways. For example, they had to introduce new products to the market, study consumer behavior, manage the performance of new products and services and introduce internal projects to promote performance. The traditional ways of handling banking matters no longer exist. Planning, marketing, operations research, cost accounting, and financial management have all become new and important ways of managing banking matters. All of these now form part of the discipline of project management (Kerzner, 1980; Finley, 2002; Williams, 2004).

For the past twenty years, project management was implemented mostly in traditional industries such as construction, civil and engineering. However, since then project management has been applied increasingly in a growing range of industry sectors such as banking, IT, and accounting (Carden and Egan, 2008). A study carried out by Cooke and Arzymanow (2003) to investigate the maturity of project management in six different industries including Petrochemical, Defense, Pharmaceutical R&D, Construction, Telecommunications, and Financial Services. The study has concluded that “‘industries of origin” especially the Engineering based sectors such as construction and defense scored more highly in terms of project management maturity than did the industries that have adopted project management more recently such as financial services or pharmaceutical R&D. This suggests that the adoption of project management is fairly new to the banking industry. Finley (2002) argues that only during the past ten years has project management become integral to many

financial services firms, such as banks, insurance companies and investment houses. The usage of project management in the banking sector "is characterized by new approaches to management restructuring and the adaptation of special management techniques" (Kerzner, 1980, p.17).

Kerzner (1980) argues that the use of project management in the banking industry is credited to the massive change in technology and market environment. For example, many banks across the world have introduced new fee-based services such as online payment and ATMs. Another example, the management of multiple projects across several banking functions is common in the banking industry. Managing such complex organisational infrastructure requires introducing new management processes in order to ensure their completion. Bennis (1969) points out that with greater market evaluation, bureaucracy does not have the capability to respond. He argues that temporary management systems such as project management practices will be the best solution to cope with such complex situations. Kerzner (1980) points out that banks need to use project management to deal with the issues highlighted below:

1. The absence of effective cost systems
2. The need for improved communication between line and staff divisions
3. The increase in competition from both other types of financial institutions and large banks expanding their sphere of influence.
4. An absence of effective long-term planning

Aside from the above mentioned points, the use of project management approaches in the banking industry can yield valuable benefits such as completing tasks effectively and efficiently and is likely to be better than the traditional methods for accomplishing one-time activities with least amount of disruption to routine business. However, despite all of the benefits of using project management in the banking industry, several banks have chosen not to use it. Several explanations are attributed to the lack of usage of project management in the banking sector. Killian (1971) identified five major reasons for not using project management in an organization namely: 1) the conflict of authority and resources, 2) the fear of the unknown in managing the business with non-traditional methods of management, 3) project

priorities and competition may interrupt the daily business routine and functions, 4) losing control over the organization's long term planning since it will focus more on satisfying the requirements of temporary projects, and 5) disruption to the employees' specialization and training since they would be more engaged in projects which are not part of their specialty.

There are several studies that have investigated the practices of project management in the banking industry. Williams (2004) carried a study in the banking and finance industry. He used a project in a company called NCR Financial Solutions Group to investigate how organizations could learn lessons from projects. His paper concluded that in the banking industry, learning from experience is essential and includes both explicit and tacit knowledge. These types of knowledge help to improve project management processes and practices.

Planning is a very important area in the banking industry and has been highlighted previously as one of the most important reasons for increased uptake of project management practices in the banking sector. The Canadian Imperial Bank of Commerce (CIBC) has carried out a one year project for 20,000 workstations at 1,200 branch banks. In order to accomplish this task, the bank's project management team utilized a planning methodology which consisted of three major steps called: Approach and Strategy, Process Design, and Detailed Job Procedures. In addition, a risk management plan was put in place. All the risks were identified for each of the project's phases and shared and discussed with the project's stakeholders to obtain their approvals. The project was completed successfully on time with a satisfactory overall result (Chauduri and Schlotzhauer, 2003).

With the rapid development of technology a recent phenomenon in the banking industry is moving their businesses online in the form of financial portals. Finley (2003) observed that with implementing e-projects in the banking industry several areas for improvement were identified including lack of understanding of the requirements, poorly defined objectives and undesirable deliverables, were amongst them. Using project management techniques such as defining the objectives during the planning phase, mapping financial product development to the project

management process and the project's appraisal would help with overcoming such issues.

The role of the project manager is important in enhancing the performance of banking projects. Chen (2002) studied the Bank Credit Registration Consultation System project which was introduced by People's Bank of China with the participation of all the financial institutions and banks. The main objective of the project was to introduce a unified set of databases providing individual credit information across China. The project was completed successfully. In fact, the success of this project has allowed China to be among the top 16 countries in the world to get access to credit (Su Ning, 2007). Chen (2002) attributed the success of this project to the project managers who were responsible for managing the project and communication in cross-functional teams and between organizations, motivating team participants, resolving conflicts and maintaining the project's schedule.

Bureaucratic controls in the banking industry work as a major obstacle in global expansion. The role of transformational leadership in the banking industry has been investigated in several studies to overcome the problems of inertia created by bureaucratic controls (e.g. Sanjeewani and Jayakody, 2006; Ahangar, 2009).

#### **2.4.2 Knowledge Sharing in banking industry**

It has been acknowledged that KS in the banking industry can yield great gains, is considered as a crucial asset and is a critical success factor to enhance competitive advantage (O'Dell and Grayson, 1998; Tan et al, 2010). Research suggests that the services sector especially banking operations realize the importance of KS practices (Pemberton et al, 2002). Alrawi and Elkhatib (2009) point out that the banking sector started to concentrate on KS initiatives to reduce cost, time and to improve the bank's operation's efficiency.

HSBC is one of the largest banking and financial services organizations in the world that have adopted KS practices. For example, the knowledge management unit in HSBC which was established in 2002, introduced an electronic expertise-location tool and the development of the e-directory. Both of these previous tools have been used

for knowledge-acquisition projects to reduce business risks and capture expertise. In addition, these tools have been used to store the work and the experience of the old staff, so if they had to leave, new staff can benefit from their work and knowledge (Ellis, 2006).

Despite that fact that the banking industry is aware of the importance of KS, the application part of it remains a challenge due to the complexity of the banking environment (Hafizi and Hayati, 2006).

### **2.4.3 Knowledge Sharing factors in the banking industry**

There are several studies that have looked at factors involved in KS. For example, David (2002) identified four major KS factors, namely; 1) Intentions to share knowledge, 2) Attitudes toward KS, 3) Subjective norms, and 4) perceived behavioral control. Tan et al (2010) have investigated the motivational factors influencing KS between banks in Malaysia. Both intrinsic factors such as trust, learning, behavior and extrinsic factors (organisational culture, reward system, information technology) were taken into consideration in the study. The study concluded that Information Technology has the highest influence in KS followed by Learning, Reward System, Organization Culture and Trust. However, Behaviour does not have any significant effect on the KS process.

An exploratory research study based on a survey of 72 managers working in the banking sector in Abu Dhabi Emirate, UAE by Alrawi and Elkhatab (2009) found several factors that contribute to KS such as: Technology infrastructure, Organizational infrastructure, Balance of flexibility, Ease-of-accessibility to knowledge, Knowledge-friendly culture, motivation and willingness to share knowledge. They also noted that power and authority are barriers to processes of KS.

Osman (2007) identified several factors that enhance KS in the Lebanese Banking Sector such as culture, intention to share knowledge, attitude to share knowledge, organization's knowledge management initiatives and performance appraisal and reward. Another study by Chatzoglou and Vraimaki (2009) examining the KS factors in the banking sector specifically in Greece found out that intention to share

knowledge is mainly influenced by employees' attitude towards KS, followed by subjective norms. Hsiu-Fen Lin's (2007) empirical study found that enjoyment in helping others, knowledge self-efficacy and top management support factors have more influence on processes of KS than do organizational rewards and technology factors-information and communication technology.

#### **2.4.4 National Culture in the banking industry**

With globalization, many projects include multi-cultural teams, international stakeholders and foreign managers. The research suggests that the study of the NC in the banking industry is limited. However, the influence of the NC in the banking industry is being acknowledged. An extensive study of 41 countries by Kwok and Tadeese (2006) found out that the configuration of countries' financial systems is shaped by the NC and especially the uncertainty avoidance variable. The authors argue that countries which are characterized by higher uncertainty avoidance are more likely to have a bank-based system. The study found out that in Anglo-Saxon countries such as the US and the UK financial systems are dominated by stock markets. However, banks play a predominant role in countries such as continental Europe and Japan

It has been argued in several studies that the implicit and explicit significance of NC is prevalent in the service industry especially in banking. One explanation for this uniqueness could be attributed to the fact that in the banking sector the awareness and sensitivity of the NC is extended to the consumers especially in term of distribution of product design, advertising and service quality expectations (Robert et al., 2005).

In a similar vein, Dash et al., (2009 ), carried out a field study investigating the relationship between Canadian and Indian consumers' national cultural orientations and banking service quality expectations, using Hofstede's five cultural dimensions and five dimensions of service quality taken from Parasuraman et al.'s SERVQUAL scale. The study found that Canadian consumers with low power distance expect highly responsive and reliable service. Whereas, Indian consumers with high power distance attach higher importance to tangible service attributes. In addition, Canadian

consumers high on individualism expect lower empathy and assurance from service providers such as banks and insurance companies. The research highlights the importance of identifying the variance of consumer's NC especially in the service quality expectations.

Robert et al (2005) explored the relationships between NC and strategic behavior in the banking industry in Jordan and the US. The exploratory study found significant relationships between certain national cultural strategic characteristics, risk propensity, time orientation, and openness to change, uncertainty avoidance and managerial perception of control over the environment. The study found out that the Jordanian sample showed less sensitivity to time orientation than did the American sample. Additionally, the study found that the strategic behavior is influenced by openness to change and uncertainty avoidance. In these two parameters the American sample scored higher than the Jordanian sample.

Another study by Morris et al., (2008) examines how NC of the co-worker networks in the American, Chinese, German, and Spanish employees impacts on the divisions of a global retail bank called Citicorp Consumer Bank. The study found that the American employees give less attention to social relationships at the workplace than do the other three groups. In addition, the Chinese relationship with their co-workers is categorized with an affective tone of respect and admiration. However, the German relationship with their coworkers tends to be more formal and more focused on job-required topics. The Spanish on the other hand prefer to have a higher level of affective closeness with their coworkers.

#### **2.4.5 The influence of the National Culture on Knowledge Sharing in the banking industry**

The literature review demonstrates some evidence of the influence of NC on KS within the context of the banking industry. This dissertation research study makes an empirical investigation of the influence of NC on KS within the context of global projects in the banking industry. In the paragraphs below, three case studies from BankCo are provided to illustrate the purposes and approaches of its global projects.

## **2.5 Global project management is BankCo**

### **2.5.1 Overview of BankCo**

BankCo is a leading global financial services company, has approximately 200 million customer accounts and does business in more than 140 countries. BankCo provides consumers, corporations, governments and institutions with a broad range of financial products and services, including consumer banking and credit, corporate and investment banking, securities brokerage, and wealth management.

### **2.5.2 Overview of BankCo in the Middle East and UAE**

BankCo has been present in the Middle East region for more than 50 years primarily through BankCo. The bank is directly represented in main markets including the UAE, Egypt, Qatar, Kuwait, Jordan, Bahrain, Lebanon, Algeria, Tunisia and Morocco. It has more than 3,000 permanent staff as well as 30 branches and offices in the region.

Across the region, the bank offers a range of corporate finance services including securitization, project & structured trade finance, syndication and advisory. In the last few years, BankCo has consistently ranked as the premier choice for cash management and trade services, foreign exchange products, portfolio products, capital markets primary and secondary, corporate finance, investment management and custody services; operating in more markets in the Middle East than any other bank according to industry surveys. Regarding its operations in the United Arab Emirates (UAE), BankCo built strong consumer business relations since 1964. The BankCo possesses \$1.1 billion customer deposits and is acknowledged to be the market leader in credit cards and loans<sup>1</sup>.

### **2.5.3 Global project management and global projects in BankCo**

Global project management in BankCo: BankCo global project management consists of four major components 1) Global teams, 2) Global communication and

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<sup>1</sup> On the basis of internal research done in 2008



collaboration, 3) Global organizations, 4) Global resource management, and 5) Global procurement management. The role of each is summarized in Table 13.

**Table 13: BankCo global project management components**

<b>Global Project Management Component</b>	<b>Major Roles</b>
<b>Global teams:</b> Consists of senior managers who have a direct influence on the global strategy	<ol style="list-style-type: none"> <li>1) Initiate global projects. However, country and region teams can also initiate global projects (top-down and bottom down).</li> <li>2) Monitor the performance of global projects</li> <li>3) Formulate the required strategies to address physical distance, time-zones and work practices</li> <li>4) Formulate decision making structure and global communication strategy</li> </ol>
<b>Global resource management:</b> Consist of 35-40 HR expertise with global experience	<ol style="list-style-type: none"> <li>1) Allocate the required resources between different countries</li> <li>2) Coaching and training</li> <li>3) Allocate needed expertise in global projects across countries</li> </ol>
<b>Global organizations:</b> they refer to the countries, region or the external organizations involved in the global projects	<p><i>- Region roles:</i></p> <ol style="list-style-type: none"> <li>1) Establish reporting structures and agree upon the working practices, 2) Introduce schedule, cost, quality control, Planning and risk management, and 3) initiate global projects</li> </ol> <p><i>- Countries roles:</i></p> <ol style="list-style-type: none"> <li>1) Select the required people from each country</li> <li>2) Follow the plan from the region</li> <li>3) Interact with other counties and different organizations</li> <li>4) Initiate global projects</li> </ol> <p><i>-External organizations roles:</i></p> <ol style="list-style-type: none"> <li>1) Has a minimum role as they should follow what is provided by the global, region and countries teams</li> </ol>
<b>Global procurement management:</b> refers to the management of the required materials and services	<ol style="list-style-type: none"> <li>1) Formulate vendor listing, inquiry, quality, vendor selection and contracting</li> </ol>
<b>Global communication and collaboration</b>	<ol style="list-style-type: none"> <li>2) Establish tools and times for communication and collaboration.</li> <li>3) Agreed on the preferred language and mode of communication</li> <li>4) Monitor project information and communication technology infrastructure including robust system structure and system configuration.</li> </ol>

Within the context of BankCo global project management is defined as the practices, processes and people required to accomplish the performance of a global project.

Whereas, a global project is defined as a transnational project, a limited time project in which people who are culturally diverse, geographically dispersed, working in different countries, diverse cultures, and having different first languages are cooperating in order to achieve a similar mission. However, the mode of communication includes both virtual and non-virtual means and thus it could be concluded that a global project is a combination of both virtual and distributed projects.

Global projects were first introduced to BankCo more than 200 years and it is not a new phenomena. It might be argued that the use of the technology has changed over time but the concept of applying a global project remains the same for BankCo. Approximately 800 global projects are implemented per year these include technological projects, database, financial services projects, and marketing, finance, and research projects.

There are three levels of management that are involved in managing and implementing BankCo global projects namely, the global, regional and local levels. The life cycle of BankCo global project consist of four major phases including initiating, planning, implementation and closeout. The first phase is done both top-down and bottom down, with the levels including global, regional and local teams, in which they initiate a global project based on the needs of the market. The planning phase is done by the region team who plan the whole project based on the objectives introduced by the global or country team.

The implementation phase is executed on a country level- and becomes local after the regional team communicates the tasks to all the involved countries. It is the task of each country to identify the major participants in each country. Usually, 6- 25 people are involved in each global project from each country. This stage is the most critical part of the BankCo global project life cycle. The last stage, closeout is completed by all of the three major contributors' global, region and local.

The main objectives of these projects is to save cost, improve efficiency, standardize processes and practices, enhance knowledge sharing and best practices. Three global

projects examples from BankCo will be discussed in below in order to illustrate how global projects are being managed.

#### **2.5.3.1 Case Study One: The Customer Satisfaction and Loyalty Measurement (CS&LM) project**

The CSLM program was introduced by the global management team. The CS&LM program is a regionally consistent program launched in October 1998 to track customer satisfaction and commitment from the customer perspective. In 2007, 15 countries, all in EMEA markets participated in the CS&LM including the UAE. The main objective of the programme is to study customer loyalty patterns across different product lines and service delivery channels. The program's sub-objectives are 1) Provide insights to develop action plans to improve satisfaction and loyalty; 2) Locate and fix problems that can lead to reduced loyalty and attrition; 3) Prioritise improvement efforts; 4) Measure effectiveness of marketing and quality initiatives aimed at increasing loyalty; and 5) Share best practice within countries, across the region and globally. The total cost of the project was \$1million.

The CS&LM is a telephonic survey consisting of two major modules: 1) Consumer and 2) Competitor. Both the consumer and competitor modules consist of three major segments—banking, credit card and mass affluent. The two modules are researched systematically by an external research company in which the region and global teams have agreed upon across the countries that will participate. The decision of choosing the research company is based on what the global procurement teams provide and contract with, based on certain criteria such as cost, reputation, quality and experience. The role of the region team is critical in this stage, as they should plan the project's scope, schedule, method of communication, and cost, etc. The role of the countries is not easy to coordinate and standardise especially since they should carry the project in line with all of the other countries at the same time. In this stage, the communication and interaction between different countries and research company is high. Thus, it is important to agree upon the best way of communication such as email or conference videos. Once the research is done, the results are communicated at the country, region and global levels.

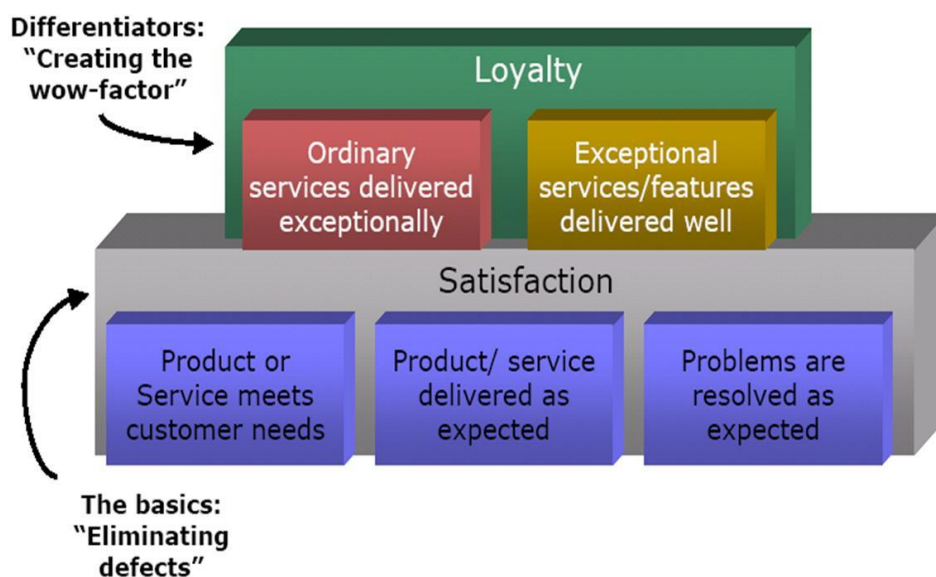
### 2.5.3.2 Case Study Two: NPS: Net Promoter Score

The NPS is a measure of customer loyalty for a given company, business or product. It is also a simple, actionable metric that provides a basis for setting strategic business priorities to drive customer-centric mentality. The NPS was introduced in BankCo in 2008. As of year 2010, 12 out of 15 counties are involved in this project as below:

- 1) Seven countries from Asia
- 2) Two countries from EMEA
- 3) Two countries from Latin America
- 4) One country from North America

The total cost of the project is \$3.5 million for 2010. The global team introduced this project because they believed that testing loyalty is important and it goes beyond satisfaction level- See Figure 11

#### Loyalty goes beyond satisfaction

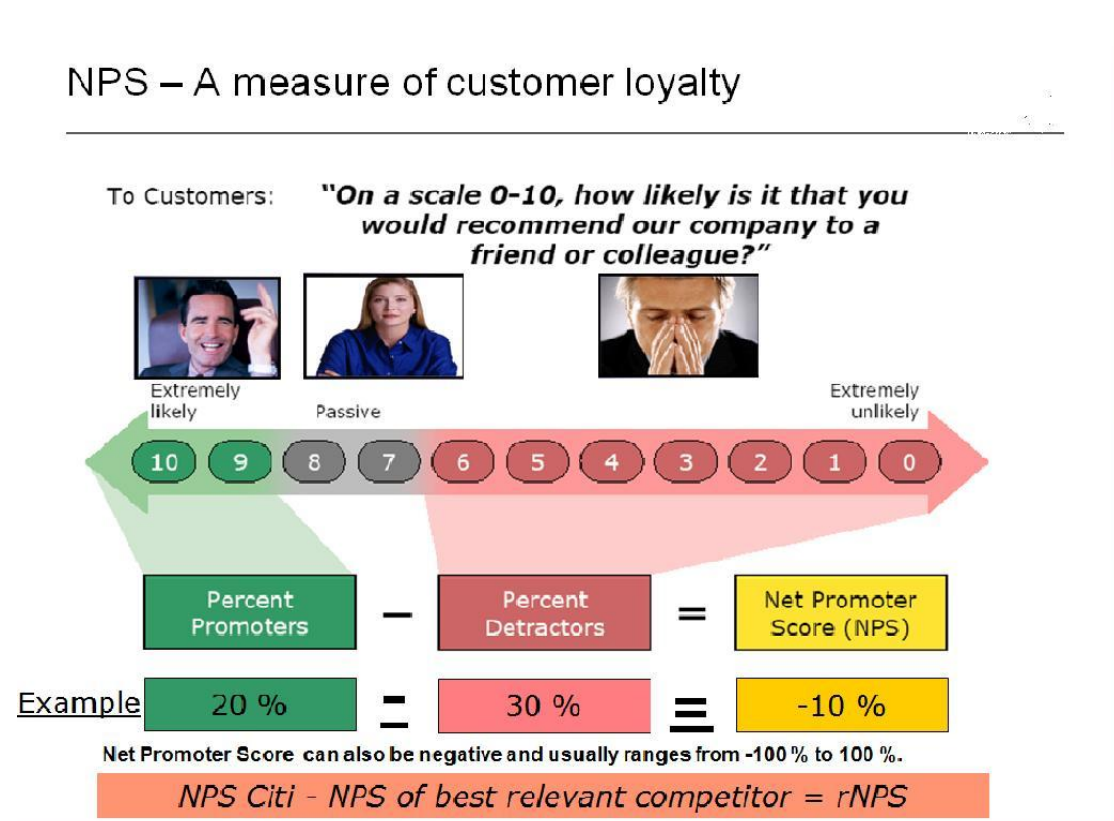


**Figure 11: Loyalty verses Satisfaction**

(Source: BankCo, NPS Q4, 2010 report, p.4)

With reference to Figure 11 , the proportion of those who think it unlikely they would recommend BankCo brand called (Detractors) are subtracted from the proportion that are likely to recommend it (Promoters) which produces a single number known as a Net Promoter Score.

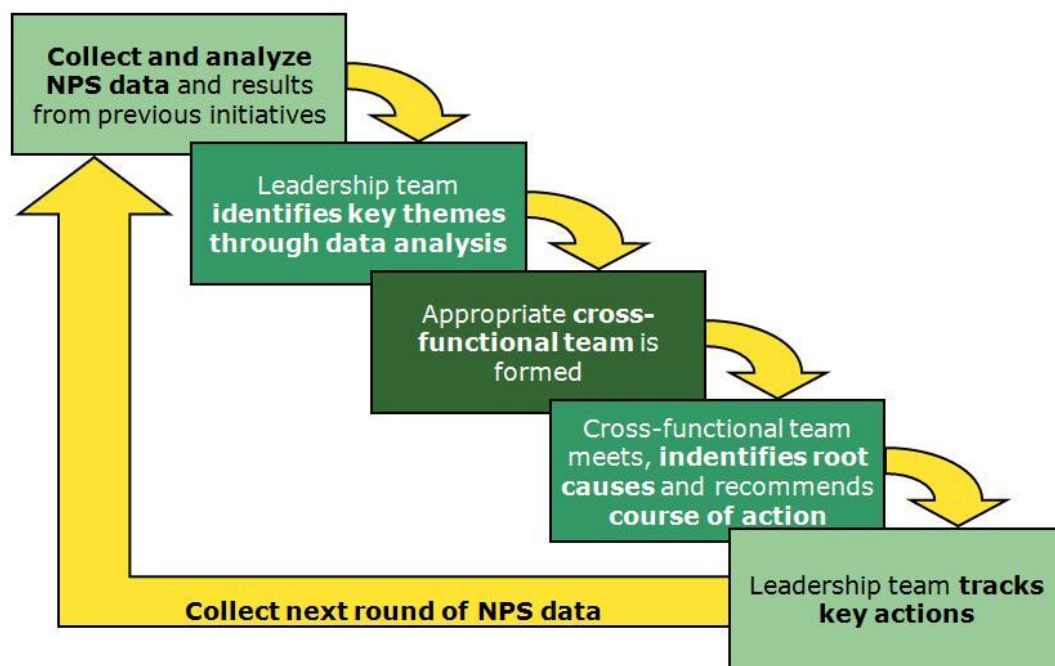
The NPS is a telephonic survey completed by an external research company in which the region and global teams have agreed upon the countries that will participate. The decision of choosing the research company is based on what the global procurement teams provide and the contract is based on certain criteria such as cost, reputation, quality and experience. The survey questions are prepared by the research company. However, the final approval is done by the global team. The NPS survey is basically asking a sample of customers how likely they would be to recommend a BankCo as a brand compared to others.



**Figure 12: NPS**

(Source: BankCo, NPS Q4, 2010 report, p.9)

In BankCo, the NPS is issued four times per year. The guideline for the sample extraction is provided by the global team to the research company. The regional team distributes the sample extraction to the countries. Each country is responsible to complete the sample and send it back to the research company. Once the sample is ready, the field work starts. During this time, much virtual communication is going back and forth between the research company team, regional team and county team in relation to sample clarification, survey questions and the best way to contact the customers. The results are communicated to the region and country once they are ready. For the NPS, a leadership team is formed which consists of a county team to discuss and close the loop of major issues that come out of the NPS results- See Figure 13.

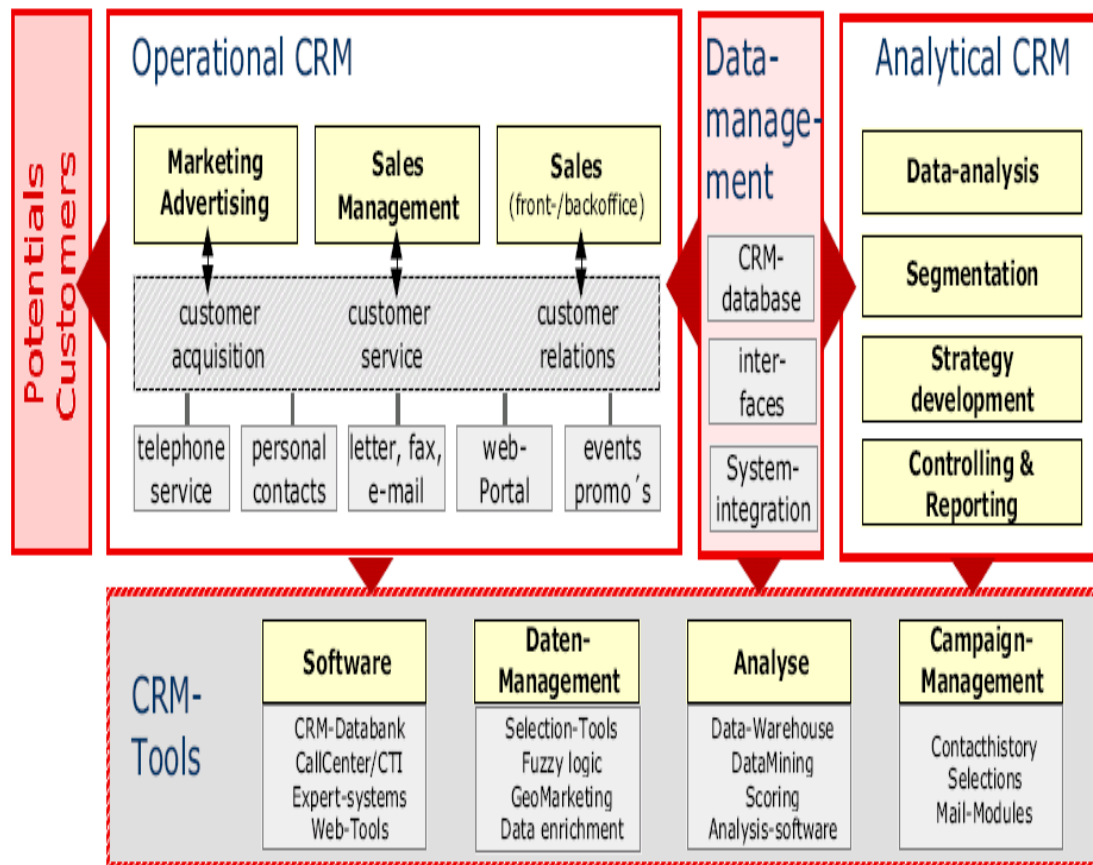


**Figure 13: Leadership Team Framework**  
(Source: BankCo, NPS Q1, 2011 report, p.8)

### 2.5.3.3 Case Study Three: CRM: Customer Relationship Management

Customer relationship management CRM is a software project. Basically it is a system in which the bank can manage its relationship with its customers. In BankCo,

the customers are the main driver of the business. Thus, growing the customer base and its profits is important. One way to do that is to build strong in-direct customer relationships through adopting CRM. With reference to Figure 14 , the BankCo CRM framework is represented.



**Figure 14: CRM Framework**

(Source: BankCo, CRM overview report Q1, 2011, p.11)

The CRM software focuses on creating a customer database that presents a consistent picture of the customer's relationship with the bank, and provides that information in specific applications such as sales force automation and customer service- See Figure 15- Example.



**Figure 15: Sample of CRM customer details**

(Source: BankCo, CRM overview report Q1, 2011, p.28)

The CRM information for each customer is updated regularly. The main benefits of CRM are summarized below:

- 360° Customer View such as demographics, all products, offers & responses and phone number history
- Campaign management
- Anticipate customer expectations and predict customer behavior such as intention to purchase, lifetime profitability, and credit risk.
- Contact management
- Lead management
- Customer holistic overview
- Integrated solution across all channels
- Identify the customers' present and future financial needs.
- Meet individual customer needs
- Increased operational efficiencies



Originally, the CRM was introduced and developed by the Hungary local team in 2005. The idea was accepted by the global and the regional team. Thus, it was replicated in the Czech Republic, Romania and UAE. The future plan - this will be extended to rest of the markets in EMEA and other markets. The overall cost of this project is \$200,000 USD.

In the UAE, a team of 35 people were involved including people from the Statistical Intelligence Unit, Technology and business lines. The availability of the expertise from different countries was essential to the implementation of this project. The role of global resource management was profound in this project as they had to contact the software and data expertise to train other employees how to develop the CRM in-house. The Hungary team was in charge of training in this project since they were the first mover. In addition, the global procurement management team was in charge of buying the required the hardware and software products. However, cost was paid for separately by each county itself. For this project there was much non-virtual communication than virtual communication. The implementation of the project took 3-6 months.

### **3. Methodology**

Methodology plays an important role in the research since it concerns the credibility of the study. This empirical research explores the influence of NC on KS. This chapter justifies the research design for this dissertation. A research model and questionnaire were devised, which are discussed. This section presents details of sampling procedures, pilot study and research procedures. This section concludes with an overview of the ethics considerations and appropriate methods of data analysis.

#### **3.1 Research design**

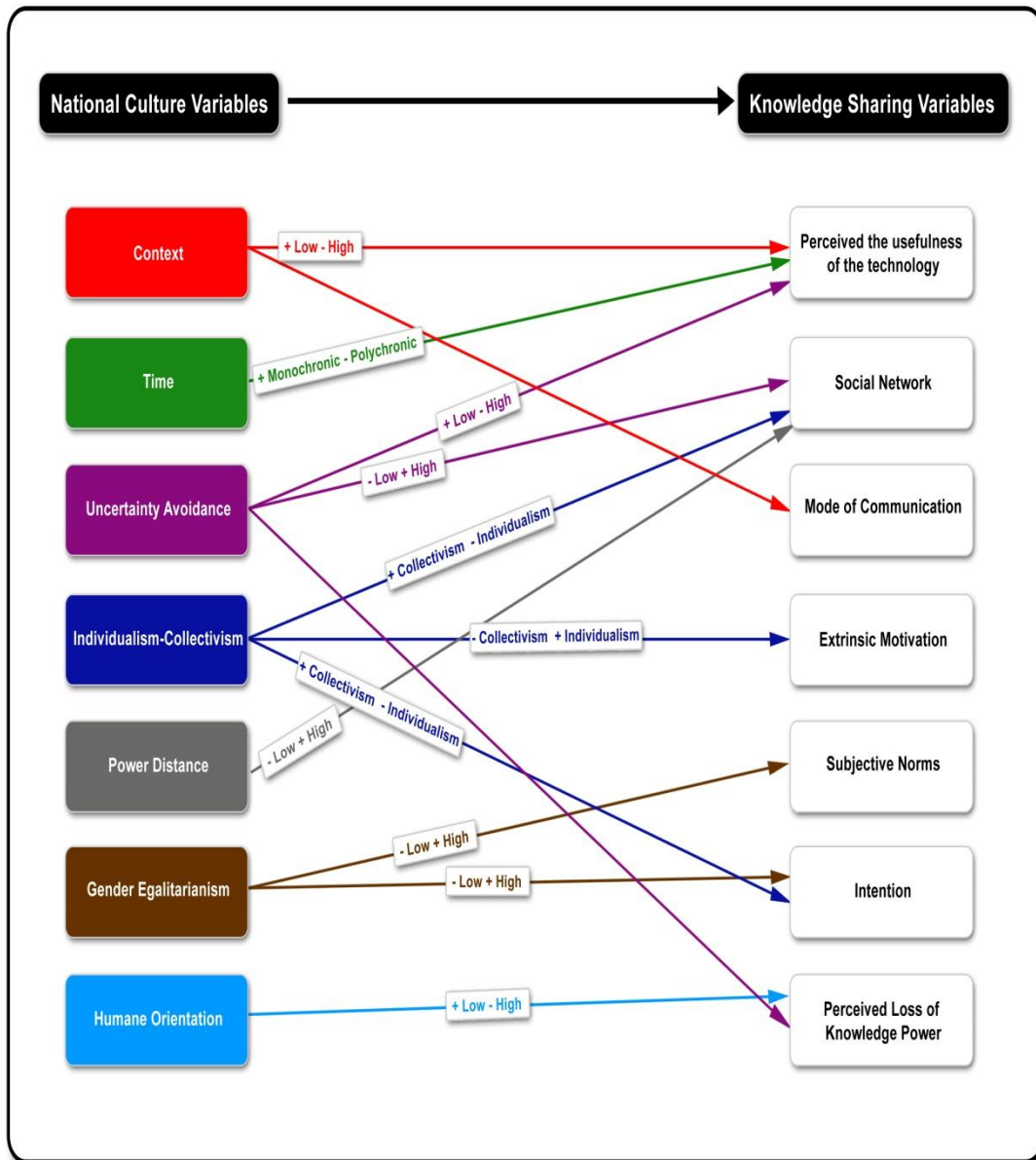
A quantitative questionnaire survey was chosen to conduct this study. Several reasons could be attributed to such selection. First, the nature of the study is looking at the relationship between the influences of NC on KS as presented in Figure 16. The survey, as suggested by Page and Mayer (2000) is considered as a strong reliable research tool to perform statistical analysis which helps in finding the cause and effect relationship. Second, Creswell (2003) pointed out that survey allow the researchers to compare and contrast responses across groups which is important in this study as we are looking across different national cultures. Third, timeframe to conduct this study is limited thus the survey is considered less time consuming method compares to cross-case study method or non- structured interviews. Fourth, the ease of data access and survey development. The researcher is a senior assistant manager in market research and consumer insights in the organization thus data access and survey development would be easier.

#### **3.2 Limitations of the research design**

It is worthwhile mentioning some of the limitations arising from the chosen design. First is low response rate. To decrease the low response rate due to uncertainty about the usage of the research, the employees were promised with a copy of the aggregated results by confirming with an email when they complete the questionnaire. Second are incomplete responses. In order to overcome incomplete responses, the website designers have made all the questions mandatory in which the respondents cannot proceed with the next step of the survey until the pervious step is completed.

### 3.3 Research Model

The following research model was created for further clarification.



**Figure 16: A Research Model of National Culture and Knowledge Sharing**

Definitions of the NC variables can be referred in Table 2, 3 and 7 in the previous chapter. As mentioned previously, previous studies have identified a number of factors that influence the KS. However, for the aim of this study and since we are looking at the influence of the NC on KS processes, it is believed that the KS factors – summarized in Table 14- are more relevant than other factors since relationships were found in research.

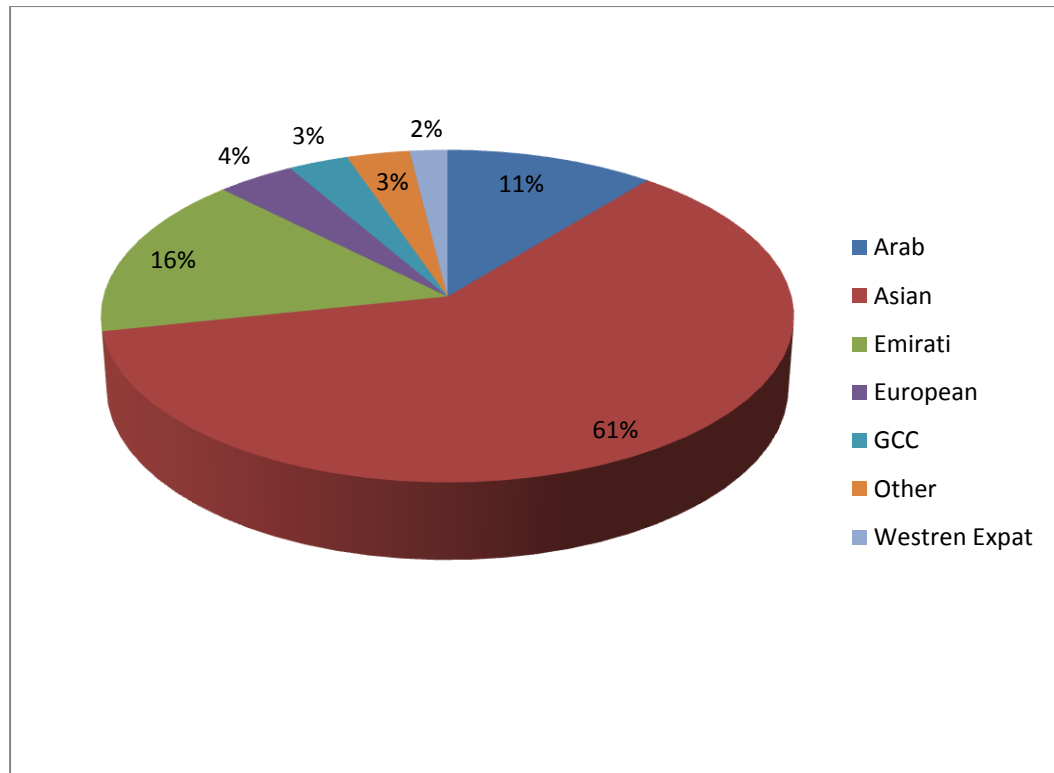
Accordingly, the above figure was developed from the propositions that have been mentioned in the literature review chapter. It demonstrates that several KS variables (Perceived the usefulness of the technology, Social network, Mode of communication, Extrinsic motivation, Subjective norms, Intention and Perceived loss of knowledge power) could be influenced by more than one NC variable. For example, Perceived the usefulness of the technology appears to have an effect on three NC variables, i.e. context, time and uncertainty avoidance.

**Table 14: Knowledge Sharing variables definitions**

<b>Knowledge Sharing factor</b>	<b>Description</b>	<b>Reference</b>
<b>Intention to share knowledge</b>	The extend in which the individual will be willing to share his/her knowledge	So and Bolloju, 2005; Fishbein, and Ajzen, 1981)
<b>Preferred Mode of Communication</b>	The individual's preferred mode of communication in sharing knowledge in projects	(Ardichvili et al., 2006; Bhagat et al., 2002)
<b>Extrinsic Motivation</b>	Monetary reward expectation as a result of sharing a certain knowledge	(Bartol and Srivastava, 2002)
<b>Subjective Norm</b>	Is the perceived social pressure to engage or not to engage sharing knowledge	(Fishbein, and Ajzen, 1981; Bock et al., 2005)
<b>Social Network</b>	Refers to the number of the people that the individual is engage with	(Kim and Lee, 2006)
<b>Perceived Loss of Knowledge Power</b>	The individual's perception about control and ownership of KS	(Kankanhalli et al.,2005)
<b>Perceived Usefulness of the Technology</b>	The individual's perception about the usefulness of the technology in KS	(Bock et al., 2005; Lu et al., 2006; Sveiby, 2001)

### 3.4 Sampling Procedures and Sample Size

This dissertation is looking primary at the influence of NC on KS within the context of global projects. There are around 3000 employees in BankCo UAE. Overall there are over 50 nationalities classified- See Figure 17.



**Figure 17: National Cultures in BankCo.**

A convenience sample of employees were selected and surveyed in order to examine the study hypotheses. The sample of the employees was screened at length to ensure that they had appropriate experience of the phenomena being studied in this dissertation.

Three major exclusion criteria have been chosen to select the employees namely: 1) non-participation of global projects; 2) temporary employees such as graduate trainee; 3) low job level employees such as cleaners and office helpers. A total of 349 employees were requested to participate in this study in which 263 were returned completed. Data collection was achieved over a period of four days.

### 3.5 Study Instrument

A research contract (See Appendix 1) was developed in order to ensure the confidentiality. In addition, a questionnaire (See Appendix 2) was constructed. Cultural items and KS had to be retrieved from the relevant authors. Table (15) shows the thirteen hypotheses from pervious chapter to be tested for the study.

**Table 15: Final Hypotheses**

Number	Hypothesis	Knowledge Sharing variable	National Culture variable
1	A collectivistic culture is more likely to intend to share knowledge than an individualistic culture.	Intention	Individualism-Collectivism
2	Cultures with high uncertainty avoidance will reveal a lower perception of the usefulness of technology than will low uncertainty avoidance cultures.	Perceived the Usefulness of the Technology	Uncertainty avoidance
3	In comparison to low context cultures, high context cultures will have a lower perception of the usefulness of technology	Perceived the Usefulness of the Technology	Context
4	Monochronic cultures will perceive the usefulness of technology more highly than will cultures with a Polychronic orientation to time.	Perceived the Usefulness of the Technology	Time ( Monochronic/ polychronic)
5	Unlike collectivistic culture cultures, individualistic cultures are expected to share their knowledge when they receive extrinsic motivation.	Extrinsic Motivation	Individualism-Collectivism
6	People in individualistic cultures will have small social networks in comparison to people in collectivistic cultures.	Social Network	Individualism-Collectivism
7	People in cultures with low power distance will have small social networks in comparison to people in high power distance.	Social Network	Power Distance
8	People in high uncertainty avoidance cultures will have high social network in comparison with people in collectivistic cultures.	Social Network	Uncertainty Avoidance
9	Low humane orientation cultures will positively relate to higher perceived loss of knowledge power than high humane orientation cultures	Knowledge Ownership	Humane Orientation
10	There is a significant relationship between uncertainty avoidance and knowledge ownership.	Knowledge Ownership	Uncertainty Avoidance

11	High context cultures are likely to share knowledge better in non-verbal modes of communication such as face- to-face and telephone.	Mode of Communication	Context
12	Low context cultures prefer to use the written mode of communication to share their knowledge	Mode of Communication	Context
13	People in feminine cultures more affected by subjective norms than people in masculine cultures.	Subjective norms	Gender Egalitarianism
14	People in feminine cultures are more affected by behavioural intentions than people in masculine cultures	Intention	Gender Egalitarianism

A questionnaire (See Appendix 2) includes three major sections, each is explained below. It comprised a total number of 67 questions. NC and KS variables along with relevant items and authors are summarized in Table 16.

- **Part A- Demographic and Career variables:** Gender, Age, Nationality, Education, Job position, Organization's tenor and Experience tenor. These ranged between two points to six points.
- **Part B- The KS variables** referred to the 7 variables noted in Table 14 (Perceived the usefulness of the technology, Social network, Mode of communication, Extrinsic motivation, Subjective norms, Intention and Perceived loss of knowledge power). A five-point Likert scale (Strongly Agree, Agree, Undecided, Disagree, Strongly Disagree) was used to measure the 30 items. From these previous items 27 items were retrieved from the relevant authors- See Table 16 and 3 items related to the preferred mode of communication variable were developed by the researcher based on other sources of information from the literature i.e. Ardichvili et al., 2006 and Bhagat et al., 2002).
- **Part C- The Culture variables** included 30 questions related to NC variables as noted in Table 16. The scales used for each items were the

same scales that have been used in the original work of the authors. For example, GLOBE (2004) has used a 7-point scale in their work whereas Hofstede (2001) and Richardson and Smith, 2007 used a 5-point scale. For this study, the scales remain the same.



**Table 16: National Culture and Knowledge Sharing item Number on  
Questionnaire**

<b>Survey Variable</b>	<b>Item Number on Questionnaire and Author</b>
<b>National Culture Variables</b>	
<b>Time</b>	1-4 (Kaufman et al,1991)
<b>Context</b>	5-18 (Richardson and Smith, 2007)
<b>Power Distance</b>	19 and 20 ( GLOBE,2004) 30 ( Hofstede ,2001)
<b>Gender Egalitarianism</b>	21 ( GLOBE,2004)
<b>Humane Orientation</b>	22 and 23 (GLOBE,2004)
<b>Uncertainty Avoidance</b>	24 and 25 (GLOBE,2004)
<b>Individualism-Collectivism</b>	26-29 (GLOBE,2004)
<b>Knowledge Sharing Variables</b>	
<b>Intention</b>	1-4 (Ajzen,2002)
<b>Subjective Norms</b>	5-6 (Bock et al, 2005) 7 and 8 (So and Bolloju,2005) 9 and 10 (Lemmetyinen, 2007)
<b>Extrinsic Motivation</b>	11-15 (Kankanhalli et al.,2005)
<b>Perceived Loss of Knowledge Power</b>	16-19 (Kankanhalli et al.,2005)
<b>Social Network</b>	20 ( Lemmetyinen, 2007) 21-23 ( Kim and Lee, 2006)
<b>Mode of Communication</b>	24-26 Researcher
<b>Perceived the Usefulness of the Technology</b>	27-29 (Davis, 1989) 30 (Davis and Vankatesh , 1996)

The survey was developed in-house online with web designer specialists in two weeks. The layout and the presentation of the survey were designed to be friendly to use and clear. For example, the survey was split into four steps and in each step there was a percentage bar in the top of each page to inform the participants about their progress. Once the participant was done he/she will be taken to thank you message page.

### **3.6 Pilot Study**

A pre-pilot test was conducted with the university advisor to evaluate the theoretical and practical background of the survey. Based on the review, few changes were made in wording and applicability of the survey's items.

A pilot survey testing was done to ensure the clarity of the instructions and ease of logical sequence of the questions. Six potential participants were then asked via email or face-to-face (at work) if they would be interested in completing a questionnaire. If interested, he/she was presented with the research contract and survey. Standardised instructions were administered on the top of each questionnaire. Once completed, questionnaires were returned in-person or via email. The participants have raised several issues which are highlighted below:

1. Preferred mode of communication factor in KS section in which the participants were asked to select their preferred mode of communication such as email, telephone and face-to face. The participants agreed that choosing a method of communication is not a choice when it comes to running global projects. Most of them did not see any value in it and they suggest removing it. However, after a consultation with the dissertation's advisor it was thought that this question is important since the nature global projects may require not only virtual communication but face-to-face communication. In addition, from the literature review a link between the preferred mode of communication and NC was found.

2. In the KS section, some of the participant suggested to replace 'Perceived loss of knowledge power' with knowledge ownership which has been accommodated in the final questionnaire.
3. In culture section Q5 until Q 18 which are related to the NC variable called context. The participants perceived the questions as too long and it does not apply to global project context since most of the people communicate virtually rather than face-to face. However, with a reference to Figure 16 the context NC variable is proved from the prior research that it would influence more than one knowledge sharing variables such as perceived the usefulness of the technology and mode of communication. Therefore, it thought that it better to keep it after an advice from the dissertation adviser.

### **3.7 Procedure**

A self-administered mail-in questionnaire was chosen as a method to send out the survey to the eligible participants since the list of the participants along with their email Ids was available with the researcher. An email merger technique was used to send out the survey to track back the response and follow-up with non-respondents. All the answers were captured and stored in an online application called IEWA. The results were downloaded in a week time directly from IEWA in Excel format.

A total number of 273 respondents were completed. However 10 respondents were removed from the final sample as they either failed to qualify for the purpose of the study- i.e. non-managerial positions or the total number is too low to be grouped in a NC segment. As a result of the elimination, the final sample consisted of 163 respondents.

### **3.8 Ethical Considerations**

To ensure high ethical standards the following steps has been implemented. First, required approvals were requested such as the dissertation's advisor, the head of

organization's UAE business, operation's head, and marketing head and finally to ensure the confidentiality of the employee's identification, the human resource head approval was obtained. Second, an email notification of the research aim and objectives was sent to all the participants in the survey emailer itself. A consent form was also created and attached with the survey emailer. The participants were informed that they can withdraw any time from the survey without any penalty. Third, to guarantee the anonymity and confidentiality of the participants the survey responses were stored in an online system and the results were reported without revealing the participant's identity information-eg.name. Fourth, the researcher's contact details such as number and email were provided in the survey emailer in case further information was required or respondents wished to raise any concerns.

### **3.9 Statistical methods for data analysis**

Both descriptive and inferential analyses of the data were calculated using SPSS version 16.0 and SAS 9.2 Enterprise Guide. Tests were based on data being at the ordinal and nominal level. All the NC and KS variables reliability were examined using Cronbach's Alpha and PCA was also applied to examine the item loading. To examine the relationships between the NC and KS factors in the proposed conceptual model Spearman rho correlations was used. In addition, Pearson chi-square and Kruskal-Wallis were performed to investigate the differences between the sample's groups. Finally, logistic regression was performed.

## 4. Results

This chapter starts with providing demographic information of the used sample for this dissertation. In addition, several statistical tests are carried out as mentioned in section 3.8 from pervious chapter. Preliminary tests are performed including normality and reliability. Pearson chi-square and Kruskal-Wallis tests are performed to investigate the difference between Arab, Pakistani, Indian and Philipino samples. Furthermore, relationships between KS variables and NC variables are inspected using Spearman's rho correlations. In addition, PCA is performed on initial KS variables and NC variables. Finally, logistic regression was performed.

### 4.1 Demographics

A total number of 263 employees working in BankCo have participated in this study. The following table reflects the sample distribution according to demographic variables (Table 17).

**Table 17: Sample Description**

	Gender	Education	Age	Experience Tenure	Organisational Tenure	Job level	Nationality
Male	146						
Female	117						
College Degree		35					
Bachelor Degree		150					
Post graduate Degree		78					
Less Than 25			31				
25 – 35			182				
36 – 45			43				
46 – 55			6				
55 Above			1				
1 year or less				6			
2 – 7 years				122			
8 – 13 years				100			
14 – 19 years				25			
20 years +				10			
1 Year or Less					31		
2 - 7 years					199		
8 – 13 years					23		
14 – 19 years					8		
20 years +					2		
Non- managerial						18	
Junior managerial						55	
Intermediate managerial						52	
High managerial						138	
Arab							88
Indian							126
Philipino							26
Pakistani							23
Total	263	263	263	263	263	263	263

The majority of participants were aged between 25-35 years old and have a bachelor's degree. In addition, the majority of them worked between 2-7 years in the organization with high managerial positions.

With a further investigation to see the demographical differences between the four sub-samples several differences were noticed. Table 18 shows that the number of males in Arab and Pakistani samples is higher than females in comparison to Indian and Philipino samples.

**Table 18: The Number of Males and Females in Arab, Indian, Pakistani and Philipino**

Identification/Sex	Arab	Indian	Pakistani	Philipino	Total
Male	51	65	18	12	146
Female	37	61	8	11	117
Total	88	126	26	23	263

Results also showed that in comparison to Arab and Philipino respondents, a higher number of Pakistani and Indian respondents were holding post graduate degree (Table 19).

**Table 19: The Education level in Arab, Indian, Pakistani and Philipino**

Identification/Education	Arab	Indian	Pakistani	Philipino	Total
College	15	12	5	3	35
Bachelor's degree	57	62	12	19	150
Post graduate degree	16	52	9	1	78
Total	88	126	26	23	263

## 4.2 Cultural Orientation

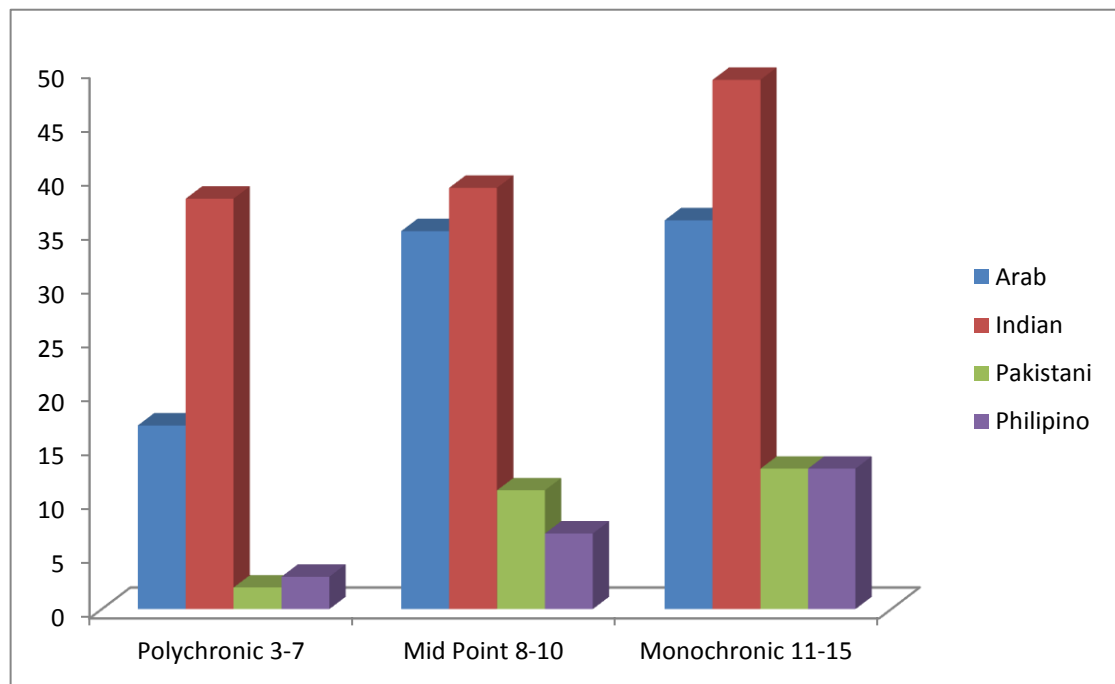
As mentioned previously, Part C of the questionnaire has looked at the cultural variables. The aim of this section is to investigate the cultural differences between the Arab, Pakistani, Indian and Philipino samples.

A 2x3 cross-tabulation examined responses for Time variable (Table 20). With reference to Figure 18, Arab, Pakistani, Indian and Philipino respondents scores high on Monochronic scale that Polychronic scale. Proportions were further examined

using a chi-square test (Appendix3), which was non-significant ( $p>0.05$ ). This confirms that there is no difference between the four groups in the Polychronic and Monochronic Orientations time aspect.

**Table 20: Polychronic and Monochronic Orientations for Arab, Indian, Pakistani and Philipino**

Identification/Time	Polychronic 3-7	Mid Point 8-10	Monochronic 11-15	Total
Arab	17	35	36	88
Indian	38	39	49	126
Pakistani	2	11	13	26
Philipino	3	7	13	23
Total	60	92	111	263



**Figure 18: Polychronic and Monochronic Orientations for Arab, Indian, Pakistani and Philipino**

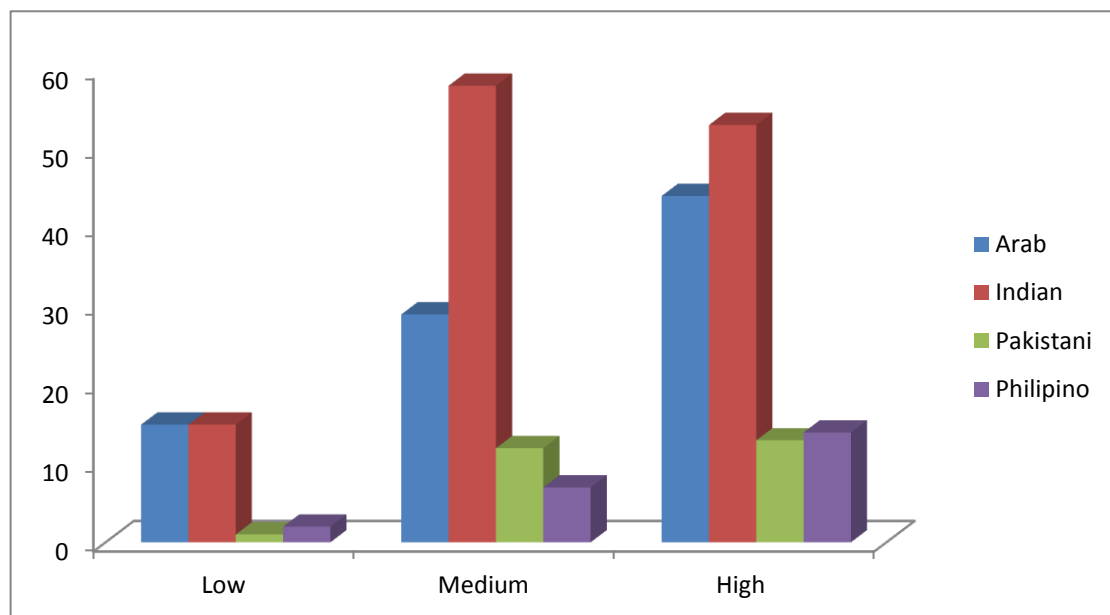


A 2x3 cross-tabulation was performed on Power Distance items (Table 21).

**Table 21: Power Distance Scores for Arab, Indian, Pakistani and Philipino**

Identification/Power Distance	Power Low	Power Medium	Power High	Total
Arab	15	29	44	88
Indian	15	58	53	126
Pakistani	1	12	13	26
Philipino	2	7	14	23
Total	33	106	124	263

With reference to Table 21 and Figure 19 the majority of Arab, Pakistani and Philipino scored high in Power Distance whereas the majority of Indian scored medium on Power Distance. However, chi-square test (Appendix 3), was found non-significant ( $p > 0.05$ ).



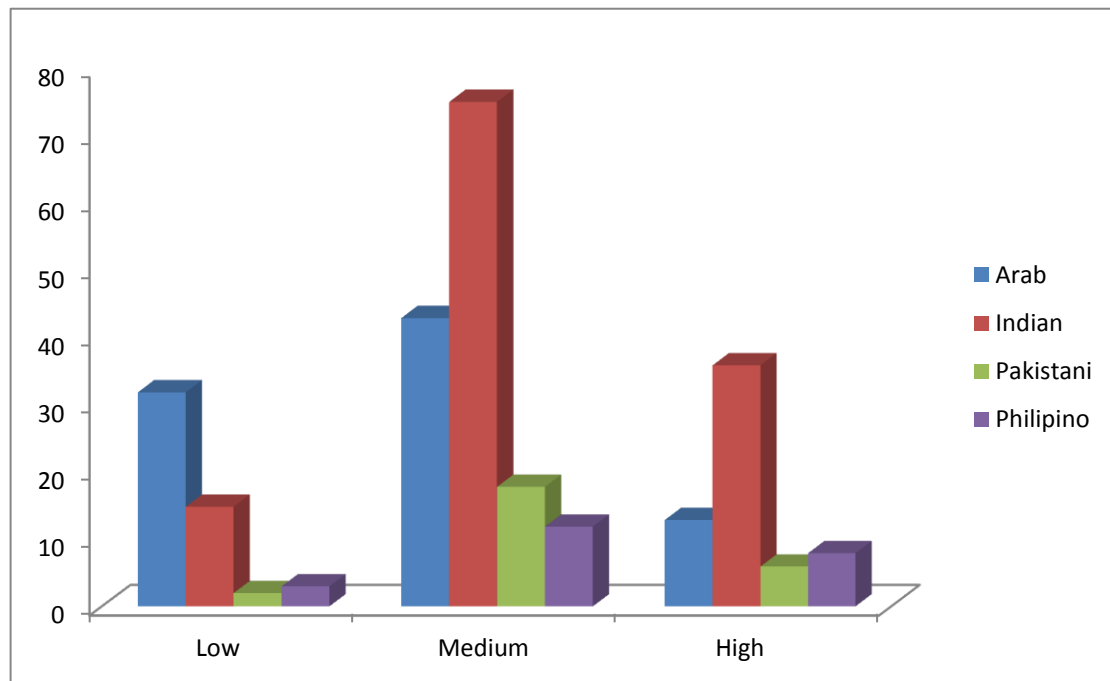
**Figure 19: Power Distance Scores for Arab, Indian, Pakistani and Philipino**

Again a 2x3 cross-tabulation was performed on Humane Orientation variable (Table 22) and Figure 20 was created for further visual clarification.

**Table 22: Humane Orientation scores for Arab, Indian, Pakistani and Philipino**

Identification/Humane Orientation	Low	Medium	High	Total
Arab	32	43	13	88
Indian	15	75	36	126
Pakistani	2	18	6	26
Philipino	3	12	8	23
Total	52	148	63	263

The results show that all the four samples scored medium on Humane Orientation variable. However, chi-square test (Appendix 3), was found significant ( $\chi^2 = 53.19$ ,  $p < 0.05$ ). The later suggests that the four groups differ on Humane Orientation variable.

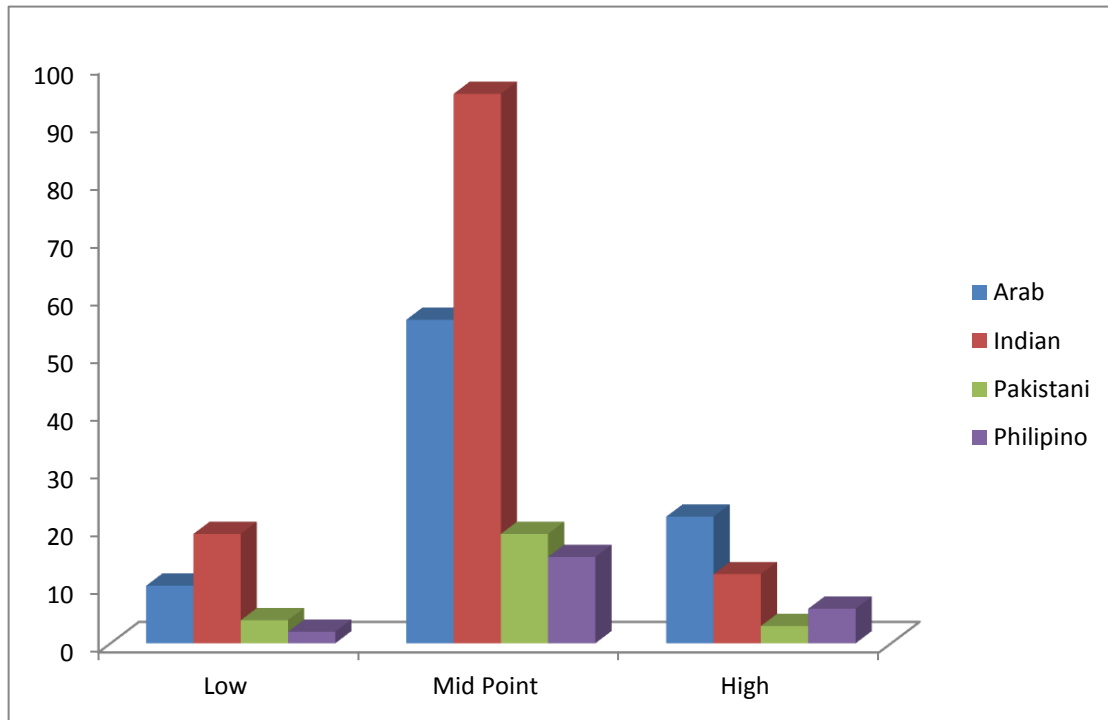


**Figure 20: Humane Orientation scores for Arab, Indian, Pakistani and Philipino**

A 2x3 cross-tabulation examined responses for Context variable (Table 23) and Figure 21 was created for further visual clarification. Results show that all four samples have scored medium in Context culture variable. This was also found non-significant ( $p > 0.05$ ) by chi-square test (Appendix3). Thus, all the groups do not differ on Context variable.

**Table 23: Context scores for Arab, Indian, Pakistani and Philipino**

Identification/Context	Low Context	Mid Point	High Context	Total
<b>Arab</b>	10	56	22	88
<b>Indian</b>	19	95	12	126
<b>Pakistani</b>	4	19	3	26
<b>Philipino</b>	2	15	6	23
<b>Total</b>	35	185	43	263

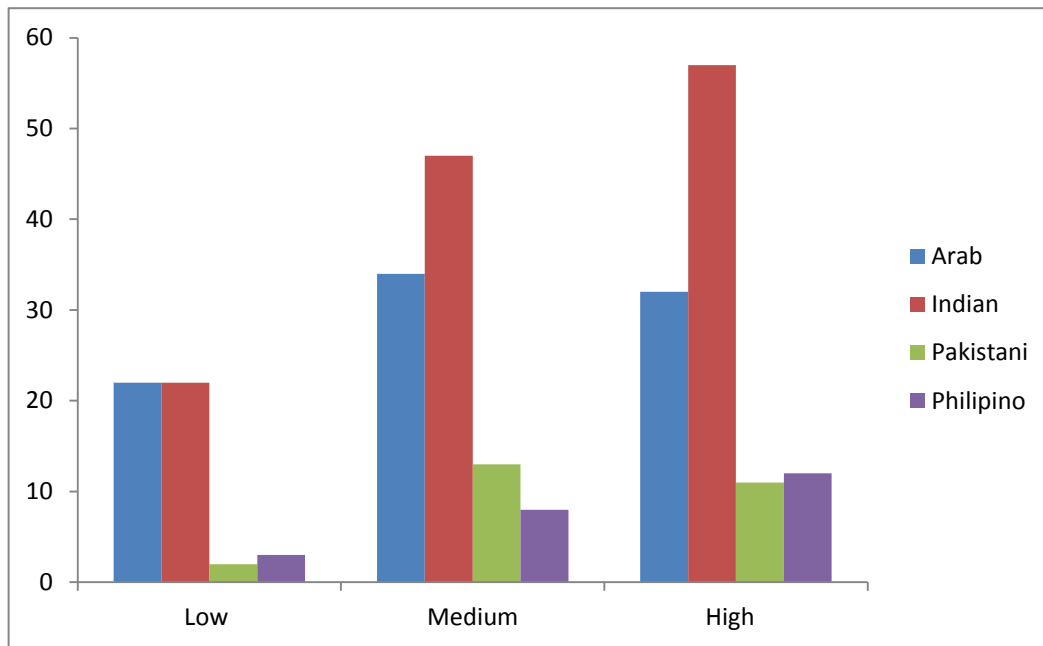


**Figure 21: Context scores for Arab, Indian, Pakistani and Philipino**

With reference to Table 24 and Figure 22 the majority of Indian and Philipino scored high in Gender Egalitariansim whereas the majority of Arab and Pakistani scored medium on Gender Egalitariansim. However, chi-square test (Appendix 3), was found non-significant ( $p>0.05$ ).

**Table 24: Gender Egalitarianism scores for Arab, Indian, Pakistani and Philipino**

Identification/Gender Egalitarianism	Low	Medium	High	Total
<b>Arab</b>	22	34	32	88
<b>Indian</b>	22	47	57	126
<b>Pakistani</b>	2	13	11	26
<b>Philipino</b>	3	8	12	23
<b>Total</b>	49	102	112	263

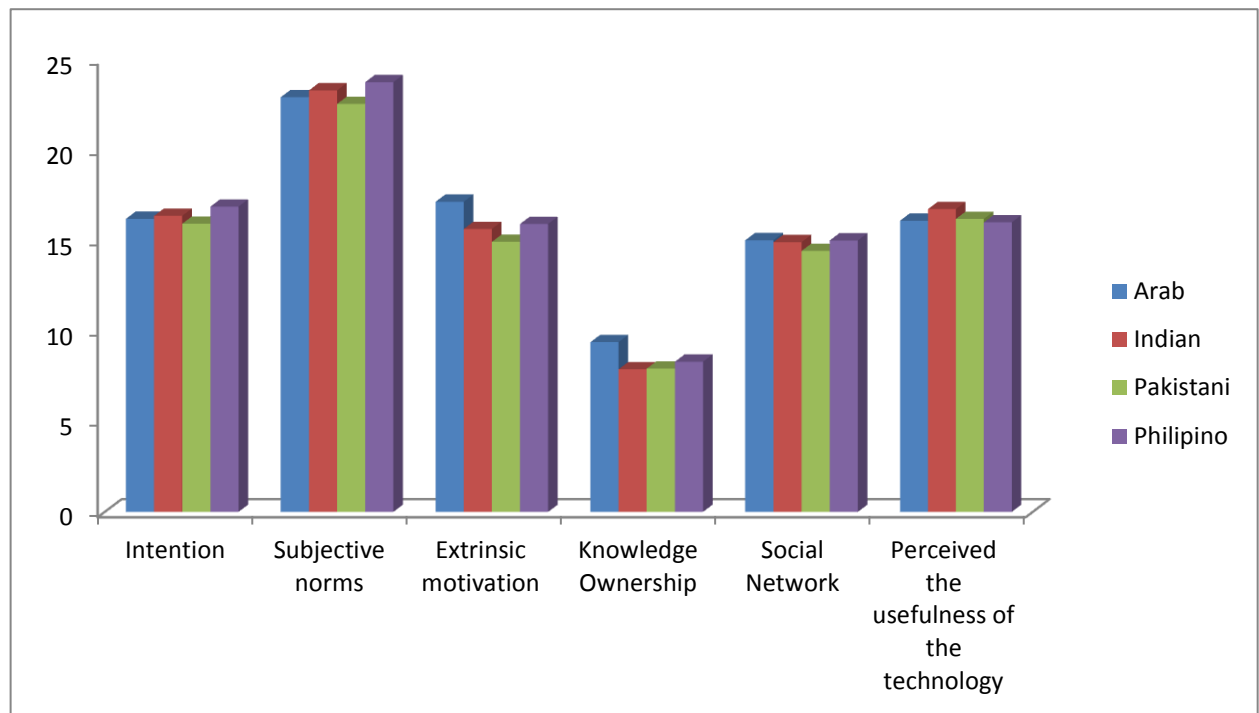


**Figure 22: Gender Egalitarianism scores for Arab, Indian, Pakistani and Philipino**

### 4.3 Knowledge Sharing Ratings

As mentioned previously, Part B of the questionnaire have looked at the knowledge variables. Primarily, it investigated the differences and similarities between the four NC samples with the KS variables. The pervious can be observed by referring to the below Figure 23. It shows that Philipino mean scores were greater than Arab, Indian and Pakistani for Intention and Subjective Norms. Unlike, Philipino, Indian and Pakistani, Arab means scores were superior for Knowledge Ownership and Extrinsic Motivation. Indian mean score, on the other hand, was higher than the other samples on the perceived the usefulness of technology. The Arab and Philipino scored higher

for Social Network variable that Indian and Pakistani. However, both have similar means ( $M=15.0$  and  $M=15$ ) for the Social network.



**Figure 23: Means for Arab, Indian, Pakistani and Philipino Knowledge Sharing Variables**

## 4.4 Inferential Statistics

### 4.4.1 Normality Testing

Several preliminary tests were performed. The 5% trimmed mean for each variable (Appendix 4) shows that mean scores are not being affected to a great extent by any extreme scores. Across most of the variables the value of the Komogorov-Smirnov has been violated ( $<0.05$ ). Furthermore, histograms and Normal Q-Q Plots were created to check the actual shape of score distribution of each variable. Few variables were bell-shaped curve which indicate normally distributed scores, while, most of variables have a skewed distribution (Appendix 4). Based on the results of the normality test, non-parametric tests were chosen to carry out the further analysis.

#### 4.4.2 Reliability

Reliability was investigated using Cronbach's Alpha (Appendix 5). 29 items for the NC and 30 items for the KS were tested and summarized in Table 25.

**Table 25: Cronbach's Alpha for Knowledge Sharing Variables and National Culture Variables**

Dimension name	Item Number on Questionnaire	Cronbach Alpha score	Cronbach's Alpha if Item Deleted	Item deleted
<b>NC Variables</b>				
<b>Time</b>	1-4	0.178	0.760	Item 4
<b>Context</b>	5-18	0.800	0.813	Item 6
<b>Power Distance</b>	19 , 20 and 30	0.354	0.631	Item 30
<b>Humane Orientation</b>	22 and 23	0.835	N/A	N/A
<b>Uncertainty Avoidance</b>	24 and 25	0.475	N/A	N/A
<b>Individualism-Collectivism</b>	26-29	0.515	0.552	Item 27
<b>KS Variables</b>				
<b>Intention</b>	1-4	0.757	0.770	N/A
<b>Subjective Norms</b>	5-6 7 and 8 9 and 10	0.821	0.819	N/A
<b>Extrinsic Motivation</b>	11-15	0.857	0.877	N/A
<b>Perceived loss of knowledge power</b>	16-19	0.929	0.920	N/A
<b>Social network</b>	20-23	0.650	0.640	N/A
<b>Perceived the Usefulness of the Technology</b>	27-30	0.806	0.784	N/A

For the NC variables, an Alpha coefficient of 0.178 was found for Time scale ( 4 items). However, this would increase to  $\alpha$  0.760 if item 4 was deleted. Therefore, item 4 was deleted from further analyses in order to increase the reliability. In addition, Power Distance reported an Alpha coefficient of 0.354 (3 items). Nevertheless, this would increase to  $\alpha$  0.631 if item 30 is deleted. To increase this coefficient value item 30 was removed from further analyses. On the other hand, Uncertainty Avoidance and Individualism-Collectivism scales reported below the acceptable level of 0.7 even after removing items. Thus, they were excluded from any further analyses. For the KS variables all the 30 items have reported above 0.6.

#### 4.4.3 Differences between Knowledge Sharing rating

A non-parametric test called Kruskal-Wallis Test was employed to investigate the differences between the Arab, Pakistani, Indian and Philipino KS rating (Appendix 6). With reference to section 4.2, a variance in some KS factors have been acknowledge between Philipino, Indian, Pakistani and Arab. By referring to Table 26, there was a statistically significant difference between Arab and other three groups in Extrinsic Motivation ( $p=0.79$ ,  $p<0.05$ ). Inspections of the mean ranks for the groups suggest that the Arab had the higher Extrinsic Motivation scores, with the Pakistani group reporting the lowest. In addition, Knowledge Ownership found to be significant ( $p=0.84$ ,  $p<0.05$ ) in which Arab were superior to other groups.

**Table 26: Mean Ranks for Arab, Indian, Pakistani and Philipino Knowledge Sharing Rating**

Knowledge Sharing	Nationality	Mean Rank
Extrinsic Motivation	Arab	149.24
	Indian	123.97
	Pakistani	110.88
	Philipino	133.89
Knowledge Ownership	Arab	150.47
	Indian	123.10
	Pakistani	124.27
	Philipino	118.85

#### **4.4.4 Knowledge Sharing Correlation**

The relationships between KS variables were investigated using Spearman's rho correlations (Table 27 and Appendix 7). Correlations were investigated in two stages .First, for the all data and them for each sample groups. With reference to Table 25, the majority of KS variables positively correlated with each other. However, some variables were non-significant correlations: Intention with Communication- Email and Chat; Subjective Norms with Communication- Email and Chat; Extrinsic Motivation with Usefulness of Technology; Knowledge Ownership with Social Network, Communication- Face-to-Face and Communication-Telephone and Communication- Face-to-Face and Communication-Telephone. In addition, Knowledge Ownership variable was the only variable that correlated negatively with Intention, Subjective Norms and Usefulness of Technology.

Nevertheless, when separately checked for Arab data (Appendix 7), Knowledge Ownership associated with Communication-Telephone. The flowing relationships were non-significant ( $>0.05$ ), Intention and Knowledge Ownership; Intention and Communication- Face-to-Face, Communication-Telephone and Communication- Email and Chat; Subjective Norms with Extrinsic Motivation, Knowledge Ownership, Communication- Face-to-Face, Communication-Telephone and Communication- Email and Chat; Extrinsic Motivation with Usefulness of Technology ; Extrinsic Motivation with Communication- Face-to-Face; Knowledge Ownership with Intention, Subjective Norms, Social Network, Usefulness of Technology and Communication- Face-to-Face; Social Network and Communication- Email and Chat; Usefulness of Technology and Communication- Face-to-Face, Communication-Telephone and Communication- Email and Chat; and Communication- Face-to-Face and Communication- Email and Chat.

In addition, for the Indian sample of data some relationships were non-significant ( $>0.05$ ): Intention and Extrinsic Motivation; Intention with Usefulness of technology; Intention with Communication- Face-to-Face and Communication- Email and Chat;



Subjective Norms with Communication- Face-to-Face and Communication- Email and Chat; Extrinsic Motivation with Knowledge Ownership, Usefulness of Technology, Communication- Face-to-Face and Communication- Email and Chat; Knowledge Ownership with Social Network, Communication- Face-to-Face, Communication-Telephone and Communication- Email and Chat;Usefulness of Technology with Communication-Telephone; Communication- Face-to-Face with Communication-Telephone; Communication- Face-to-Face with Communication - Email and Chat.

Moreover, unlike the Arab sample, Knowledge Ownership correlated negatively with Intention, Subjective Norms and Usefulness of Technology.

In comparison to Arab and Indian correlations, few positive relationships were found in the Pakistani sample as below:

- Intention with Social Network
- Social Network with Communication- Face-to-Face
- Communication- Face-to-Face with Communication - Email and Chat

The Philipino sample, on the other hand showed more positive relationships in comparison to the Pakistani sample as follow:

- Intention with Social Network and Communication - Email and Chat
- Subjective Norms with Social Network and Communication - Email and Chat
- Extrinsic Motivation with Knowledge Ownership
- Social Network with Usefulness of Technology, Communication- Face-to-Face with Communication - Email and Chat
- Usefulness of Technology, Communication- Face-to-Face with Communication - Email and Chat

**Table 27: Spearman's rho Correlations for Knowledge Sharing Variables**

<b>KS variables</b>	<b>Intention</b>	<b>Subjective Norms</b>	<b>Extrinsic Motivation</b>	<b>Knowledge Ownership</b>	<b>Social Network</b>	<b>Usefulness of Technology</b>	<b>Communication-Face-to-face</b>	<b>Communication-Email and Chat</b>	<b>Communication-Telephone</b>
<b>Intention</b>	1	.387**	.164**	-.215**	.417**	.235**	.165**	0.106	.168**
<b>Subjective Norms</b>	.387**	1	.221**	-.232**	.325**	.297**	.186**	0.099	.140*
<b>Extrinsic Motivation</b>	.164**	.221**	1	.126*	.251**	0.108	.126*	.133*	.195**
<b>Knowledge Ownership</b>	-.215**	-.232**	.126*	1	-0.01	-.179**	-0.065	.148*	0.072
<b>Social Network</b>	.417**	.325**	.251**	-0.01	1	.320**	.322**	.198**	.252**
<b>Usefulness of Technology</b>	.235**	.297**	0.108	-.179**	.320**	1	.263**	.145*	.165**
<b>Communication-Face-to-face</b>	.165**	.186**	.126*	-0.065	.322**	.263**	1	.140*	0.106
<b>Communication-Email and Chat</b>	0.106	0.099	.133*	.148*	.198**	.145*	.140*	1	.187**
<b>Communication-Telephone</b>	.168**	.140*	.195**	0.072	.252**	.165**	0.106	.187**	1
<b>KS Global</b>	.553**	.590**	.647**	.160**	.644**	.469**	.323**	.331**	.389**

Note:

\*\*, Correlation is significant at the 0.01 level (2-tailed).

\*, Correlation is significant at the 0.05 level (2-tailed).

#### 4.4.5 The link between Knowledge Sharing variables and National Culture variables

Relationships between the KS variables and NC variables were examined using Spearman's rho correlations (Table 28 and Appendix 7). Time associated positively with Communication- Email and Chat item ( $r=0.147$ ,  $p<0.05$ ). Context also correlated positively with Extrinsic Motivation ( $r=0.293$ ,  $p<0.01$ ); Knowledge Ownership ( $r=0.229$ ,  $p<0.01$ ); Communication- Email and Chat ( $r=0.228$ ,  $p<0.01$ ) and the global variable KS ( $r=0.237$ ,  $p<0.01$ ). Power Distance related positively to Subjective Norms ( $r=0.137$ ,  $p<0.05$ ); Communication- Face-to-face ( $r=0.129$ ,  $p<0.05$ ) and negatively correlated with Knowledge Ownership ( $r= - 0.179$ ,  $p<0.05$ ). Humane Orientation negatively associated with Extrinsic Motivation ( $r= - 0.148$ ,  $p<0.05$ ); Social Network ( $r= - 0.182$ ,  $p<0.01$ ); Communication- Email and Chat ( $r= - 0.176$ ,  $p<0.01$ ); Communication-Telephone ( $r= - 0.143$ ,  $p<0.05$ ) and KS globe ( $r= - 0.213$ ,  $p<0.01$ ). In addition, a negative relationship was found between Gender Egalitariansim and Knowledge Ownership ( $r= - 0.242$ ,  $p<0.01$ ). Finally, NC globe related positively with Extrinsic Motivation ( $r= 0.131$ ,  $p<0.05$ ) and Communication- Email and Chat ( $r= 0.143$ ,  $p<0.05$ )

**Table 28: Spearman's rho Correlations for Knowledge Sharing Variables and National Culture Variables**

National Culture/ Knowledge Sharing	Time	Context	Power Distance	Humane Orientation	Gender Egalitariansim	NC Global
Intention						
Subjective Norms			.137*			
Extrinsic Motivation		.293**		-.148*		.131*
Knowledge Ownership		.229**	-.179**		-.242**	
Social Network				-.182**		
Usefulness of Technology						
Communication- Face-to-face			.129*			
Communication- Email and Chat	.147*	.228**		-.176**		.143*
Communication- Telephone				-.143*		
KS Global		.237**		-.213**		

\*\*, Correlation is significant at the 0.01 level (2-tailed).

\*, Correlation is significant at the 0.05 level (2-tailed).

#### **4.4.6 Principal Component Analysis (PCA)**

PCA was used on the data (Appendix 8) in which a 29 items of KS variables were tests. Before performing PCA the suitability of data for factor analysis was assessed. Inspection of the correlation matrix revealed the presence of many coefficients of .3 and above. In addition, Kaiser-Meyer-Olkin value was 0.78 (above 0.6) and the Barlett's test is significant ( $p=0.000$ ) and therefore factor analysis is appropriate.

Principle component analysis revealed the presence of nine components with eigenvalues exceeding 1, explaining 20.1%, 14.1%, 8.2%, 6.2%, 5.8%, 4.5%, 3.6%, 3.5% and 3.3% of the variance respectively. An inspection of the screeplot revealed a break after the third component, therefore, it was decided to retain three components for further investigation. To aid the interpretation of these three components, Varimax rotation was performed (Table 29). The three-component solution explained a total of 42.4% of the variance, with component 1 contributing to 18.5%, component 2 contributing to 12.5% and component 3 contributing to 11.3%.

From examining the item loadings. Component 1 comprised most of the KS factors excluding Mode of Communication- email and Chat, Knowledge Ownership and Extrinsic Motivation. Based on this, Component 1 was renamed "KS factors". Component 2 included all the four items of Knowledge Ownership and Mode of communication- email and Chat. Thus, Component 2 was renamed "Knowledge Ownership and Communication". Component 3 contained all the Extrinsic Motivation items therefore it was decided to keep the same name.

**Table 29: Rotated Component Matrix for Knowledge Sharing Items**

Knowledge Sharing Items	Component		
	KS factors	Knowledge Ownership and Communication	Extrinsic Motivation
KS:Factor Seven: Usefulness of Technology Three	.652		
KS:Factor two: Subjective Norms Four	.637		
KS:Factor two: Subjective Norms Three	.636		
KS:Factor Seven: Usefulness of Technology Four	.598		
KS:Factor Seven: Usefulness of Technology One	.589		
KS:Factor one: Intention Two	.584		
KS:Factor Seven: Usefulness of Technology Two	.566		
KS:Factor two: Subjective Norms Two	.566		
KS: Factor Five: Social Network Three	.518	.306	
KS:Factor one: Intention One	.516		
KS:Factor one: Intention Three	.508		
KS:Factor one: Intention Four	.494		
KS:Factor two : Subjective Norms One	.491		
KS:Factor two: Subjective Norms Six	.454		
KS: Factor Five: Social Network Four	.453		
KS: Factor Five: Social Network Two	.452	.306	
KS: Factor Five: Social Network One	.425		
KS:Factor two: Subjective Norms Five	.404		
KS:Factor Six: Mode of communication- Face-to-face	.338		
KS:Factor Six: Mode of communication- Telephone			
KS: Factor four:Knowledge Ownershiop Three		.859	
KS: Factor four:Knowledge Ownershiop Two		.851	
KS: Factor four:Knowledge Ownershiop One		.832	
KS: Factor four:Knowledge Ownershiop Four		.832	
KS:Factor Six: Mode of communication – Email and Chat		.327	
KS: Factor three:Extrinsic Motivation Four			.840
KS: Factor three:Extrinsic Motivation Three			.832
KS: Factor three:Extrinsic Motivation Two			.805
KS: Factor three:Extrinsic Motivation Five			.727
KS: Factor three:Extrinsic Motivation One			.577

The 22 reliable items of the NC scale were subjected to PCA (Appendix 8). Before performing PCA the suitability of data for factor analysis was assessed. Inspection of the correlation matrix revealed the presence of many coefficients of .3 and above. In addition, Kaiser-Meyer-Olkin value was 0.74 (above 0.6) and the Barlett's test of Sphericity reached statistical significance, supporting the factorability of the correlation matrix.

Principal component analysis revealed the presence of six components with eigenvalues exceeding 1, explaining 19.8%, 9.7%, 7.9%, 6.8%, 6.3% and 5.7% of the variance respectively. An inspection of the screeplot revealed a break after the second component, therefore, it was decided to retain two components for further investigation. Varimax rotation was performed to aid the interpretation of these three components (Table 30). The two -component solution explained a total of 29.6% of the variance, with component 1 contributing to 17.7% and component 2 contributing to 11.8%. The items loadings indicates that Component 1 includes all Context items and thus it was named as context whereas Component 2 contains all 3 Time items, all 2 Power Distance items and all 2 Humane Orientation items. Therefore, it was renamed to "Power Distance, Time and Humane Orientation".

**Table 30: Rotated Component Matrix for National Culture Items**

National Culture Items	Component	
	Context	"Power Distance, Time and Humane Orientation".
Culture:Context:Eleven	.598	
Culture:Context:Forteen	.595	
Culture:Context:Five	.572	
Culture:Context:Nine	.570	
Culture:Context:Ten	.564	
Culture:Context:Three	.564	
Culture:Context:Thirteen	.553	
Culture:Context:One	.549	
Culture:Context:Eight	.523	
Culture:Context:Seven	.514	
Culture:Context:Twelve	.505	
Culture:Context:Six	.459	
Culture:Context:Four	.446	.326
Culture:Context:Two		
Culture:Time:Two		.734
Culture:Time:One		.692
Culture:Time:Three		.658
Culture:Power Distance globe :One		-.447
Culture: Humane Orientation One		-.443
Culture: Humane Orientation Two		-.431
Culture:Power Distance globe :Two		-.339
Culture: Gender Egalitariansim		

#### 4.4.7 Logistic Regression

Logistic regression investigates the factor influencing an outcome. It is also measures the degree of influencing on the outcome. Six significant logistic regressions were reported (Appendix 9). In all of the tests, we are trying to find out the influencing variables (independent variables) that affect in getting a higher score for a dependent variable. The independent variables are all the NC variables including Power Distance, Context, Time, Humane Orientation and Gender Egalitarianism. The dependent variables are Knowledge Ownership, Subjective Norms, Intention and Extrinsic motivation. Usefulness of Technology, Mode of Communication-Telephone and Social Network were non- significant to report (Appendix 9).

**Table 31: Description of a Hypothetical Data Set for Knowledge Ownership logistic regression**

Knowledge Ownership	Total Sample (N)	Total Knowledge Ownership Score (M)	Total Knowledge Ownership Score (SD)
Yes	39	8	4
No	224		
Total	263		

With a reference to Table 31, The outcome variable was participants having Knowledge Ownership (1 = Yes, 0 = No), and the four predictors were Power Distance (X1), Context(X2), Time(X3) and Humane Orientation (X4). Participants' Knowledge Ownership scores ranged from 4 to 20 points, with a mean of 8 points and standard deviation of 4 points. The Knowledge Ownership predictor was coded as 1 = Yes and 0 = No.

**Table 32: Knowledge Ownership logistic regression with National Culture variables including Power Distance, Context, Time and Humane Orientation**

Predictor	B	Wald's $\chi^2$	Df	P
Total Context	0.0684	5.6947	1	0.0170
Total Time	0.0283	0.1282	1	0.7203
Total Power Distance	-0.1192	4.9830	1	0.0256
Total Humane Orientation	-0.0313	0.2891	1	0.5908
<b>Overall model evaluation</b>				
Test		$\chi^2$	Df	P
Likelihood ratio test		18.0604	4	0.0012
Score test		18.6595	4	0.0009
Wald test		16.3971	4	0.0025



According to the model, the log of the odds Knowledge Ownership was positively related to Context and Time scores ( $p < .05$ ) and negatively related to Power Distance and Humane Orientation ( $p < .05$ ). In other words, the higher the context score is, the more likely it is that a participant would have more Knowledge Ownership. The overall model evaluation of the model includes, the likelihood ratio, score, and Wald tests. All three tests yield very similar conclusions for the present data, namely, that the logistic Model presented was more effective than the null model.

The statistical significance of individual regression coefficients (i.e.,  $\beta$ s) is tested using the Wald chi-square statistic. According to Table 31, both Context and Power Distance were significant predictors of Knowledge Ownership ( $p < .05$ ). The test of the Humane Orientation and Time merely suggest that they do not have an influence on knowledge ownership. Thus, for the present data set, the test result ( $p > .05$ ) for Humane Orientation and Time suggested that an alternative model without the Humane Orientation and Time might be applied to the data.

**Table 33: Description of a Hypothetical Data Set for Extrinsic Motivation logistic regression**

<b>Extrinsic Motivation</b>	<b>Total Sample (N)</b>	<b>Total Extrinsic Motivation Score (M)</b>	<b>Total Extrinsic Motivation Score (SD)</b>
<b>Yes</b>	160	16	4
<b>No</b>	103		
<b>Total</b>	263		

With a reference to Table 33, The outcome variable, remedial, was participants having Extrinsic Motivation (1 = yes, 0 = no), and the five predictors were Power Distance ( $X_1$ ), Context( $X_2$ ), Time( $X_3$ ), Humane Orientation ( $X_4$ ) and Gender Egalitarianism ( $X_5$ ). Participants' Extrinsic Motivation scores ranged from 5 to 25 points, with a mean of 16 points and standard deviation of 4 points. The Extrinsic Motivation predictor was coded as 1 = Yes and 0 = No.

**Table 34: Extrinsic Motivation logistic regression with National Culture variables including Power Distance, Context, Time and Humane Orientation and Gender Egalitarianism**

Predictor	B	Wald's $\chi^2$	Df	P
Total Time	-0.0739	1.5423	1	0.2143
Total Context	0.0673	11.6349	1	0.0006
Total Humane Orientation	-0.0702	2.6211	1	0.1055
Total Power Distance	-0.00023	0.0000	1	0.9955
Gender Egalitarianism	-0.0829	1.2518		0.2632
<b>Overall model evaluation</b>				
Test		$\chi^2$	Df	P
Likelihood ratio test		18.6960	5	0.0022
Score test		18.1192	5	0.0028
Wald test		16.8012	5	0.0049

According to the model, the log of the odds for Extrinsic Motivation was positively related to Context scores ( $p < .05$ ) and negatively related to Power Distance, Humane Orientation, Gender Egalitarianism and Time ( $p < .05$ ). The overall model evaluation of the model including the likelihood ratio, score, and Wald tests. All three tests yield very similar conclusions for the present data, namely, that the logistic Model presented was more effective than the null model.

The statistical significance of individual regression coefficients (i.e.,  $\beta$ s) is tested using the Wald chi-square statistic. According to Table 34, Context was significant predictor of Extrinsic Motivation ( $p < .05$ ). The test of the Humane Orientation, Power Distance, Time and Gender egalitarianism suggest that they do not have an influence on Extrinsic Motivation.

**Table 35: Description of a Hypothetical Data Set for Intention logistic regression**

Intention	Total Sample (N)	Total Intention Score (M)	Total Intention Score (SD)
Yes	229	16	3
No	34		
Total	263		

With a reference to Table 35, The outcome variable, remedial, was participants having intention (1 = Yes, 0 = No), and the five predictors were Power Distance (X1), Context(X2), Time(X3), Humane Orientation (X4) and Gender egalitarianism (X5). Participants' Intention scores ranged from 8 to 20 points, with a mean of 16 points and standard deviation of 3 points. The Intention predictor was coded as 1 = Yes and 0 = No.

**Table 36: Intention logistic regression with National Culture variables including Power Distance, Context, Time and Humane Orientation and Gender Egalitarianism**

Predictor	B	Wald's $\chi^2$	Df	P
Gender Egalitarianism	-0.0600	0.3239	1	0.5693
Total Time	0.0104	0.0165	1	0.8978
Total Context	0.00342	0.0160	1	0.8994
Total Power Distance	0.1039	3.2411	1	0.0718
Total Humane Orientation	0.0445	0.5342		0.4648
<b>Overall model evaluation</b>				
Test		$\chi^2$	Df	P
Likelihood ratio test		4.4264	5	0.4898
Score test		4.5078	5	0.4788
Wald test		4.3981	5	0.4936

According to the model, the log of the odds Intention was positively related to Context, Power Distance, Humane Orientation and Time scores ( $p < .05$ ) and negatively related to Gender Egalitarianism ( $p < .05$ ). The overall model evaluation

of the model including the likelihood ratio, score, and Wald tests. All three tests yield very similar conclusions for the present data, namely, that the logistic Model presented was more effective than the null model.

The statistical significance of individual regression coefficients (i.e.,  $\beta$ s) is tested using the Wald chi-square statistic. According to Table 36, Power Distance was significant predictor of Intention ( $p < .05$ ). The test of other NC predictors was non-significant. The later suggest that they do not have any effect on Intention.

**Table 37: Description of a Hypothetical Data Set for Subjective Norms logistic regression**

Subjective Norms	Total Sample (N)	Total Subjective Norms Score (M)	Total Subjective Norms Score (SD)
Yes	205	23	4
No	58		
Total	263		

With a reference to Table 37, The outcome variable, remedial, was participants having Subjective Norms (1 = Yes, 0 = No), and the five predictors were Power Distance (X1), Context(X2), Time(X3), Humane Orientation (X4) and Gender Egalitarianism (X5). Participants' Subjective Norms scores ranged from 12 to 30 points, with a mean of 23 points and standard deviation of 4 points. The Subjective Norms predictor was coded as 1 = Yes and 0 = No.

**Table 38: Subjective Norms logistic regression with National Culture variables including Power Distance, Context, Time and Humane Orientation and Gender Egalitarianism**

Predictor	B	Wald's $\chi^2$	Df	P
Total Humane Orientation	-0.0817	2.6243	1	0.1052
Gender Egalitarianism	-0.00658	0.0060	1	0.9384
Total Power Distance	0.0838	3.0473	1	0.0809
Total Time	-0.0275	0.1619	1	0.6874
Total Context	0.0338	2.4327		0.1188
<b>Overall model evaluation</b>				
Test		$\chi^2$	Df	P
Likelihood ratio test		7.5301	5	0.1841
Score test		7.4384	5	0.1900
Wald test		7.2061	5	0.2058

According to the model, the log of the odds for Subjective Norms was positively related to Context and Power Distance ( $p < .05$ ) and negatively related to Gender Egalitarianism, Humane Orientation and Time scores ( $p < .05$ ). The overall model evaluation of the model including the likelihood ratio, score, and Wald tests. All three tests yield very similar conclusions for the present data, namely, that the logistic Model presented was more effective than the null model.

The statistical significance of individual regression coefficients (i.e.,  $\beta$ s) is tested using the Wald chi-square statistic. According to Table 38, Power Distance was significant predictor of Subjective Norms ( $p < .05$ ). The test of other NC predictors was non-significant. The later suggest that they do not have any effect on subjective norms.

**Table 39: Description of a Hypothetical Data Set for Mode of Communication Face-to-Face logistic regression**

Mode of communication face-to-face	Total Sample (N)	Total Mode of Communication face-to-face Score (M)	Total Mode of Communication face-to-face Score (SD)
Yes	249	4.2	0.7
No	14		
Total	263		

With a reference to Table 39, The outcome variable was participants prefer Face-to-Face Mode of Communication (1 = Yes, 0 = No), and the five predictors were Power Distance (X1), Context(X2), Time(X3), Humane Orientation (X4) and Gender Egalitarianism (X5). Participants' Face-to-Face preferred Mode of Communication scores ranged from 1 to 5 points, with a mean of 4.2 points and standard deviation of 0.7 points. The Face-to-Face Mode of Communication predictor was coded as 1 = Yes and 0 = No.

**Table 40: Mode of Communication Face-to-Face logistic regression with National Culture variables including Power Distance, Context, Time and Humane Orientation and Gender Egalitarianism**

Predictor	B	Wald's $\chi^2$	Df	P
Total Context	0.0546	5.2617	1	0.0218
Total Time	0.1140	2.2247	1	0.1358
Total Power Distance	-0.0804	2.0555	1	0.1517
Total Humane Orientation	-0.1101	3.9164	1	0.0478
Gender Egalitarianism	0.0524	0.3202	1	0.5715
<b>Overall model evaluation</b>				
Test		$\chi^2$	Df	P
Likelihood ratio test		19.7107	5	0.0014
Score test		17.9895	5	0.0030
Wald test		16.9023	5	0.0047

According to the model, the log of the odds Face-to-Face Mode of Communication was positively related to Context, Time and Gender Egalitarianism scores ( $p < .05$ ) and negatively related to Power Distance and Humane Orientation ( $p < .05$ ). The overall model evaluation of the model includes, the likelihood ratio, score, and Wald tests. All three tests yield close conclusions for the present data, namely, that the logistic Model presented was more effective than the null model.

The statistical significance of individual regression coefficients (i.e.,  $\beta$ s) is tested using the Wald chi-square statistic. According to Table 40, both Context and Humane Orientation were significant predictors of Face-to Face Mode of Communication ( $p < .05$ ). The test of the time, Gender Egalitarianism, Time and Power Distance merely suggest that they do not have an influence on Face-to-Face Mode of Communication. Thus, for the present data set, the test result ( $p > .05$ ) for Time, Gender Egalitarianism and Power Distance suggested that an alternative model without them might be applied to the data.

**Table 41: Description of a Hypothetical Data Set for Mode of Communication-Email and Chat logistic regression**

Mode of communication-Email and Chat	Total Sample (N)	Total Mode of communication-Email and Chat (M)	Total Mode of communication-Email and Chat Score (SD)
Yes	249	3.6	0.9
No	14		
<b>Total</b>	263		

With a reference to Table 41, The outcome variable, remedial, was participants prefer Email and Chat as a mode of communication (1 = Yes, 0 = No), and the five predictors were Power Distance (X1), Context(X2), Time(X3), Humane Orientation (X4) and Gender Egalitarianism (X5). Participants' Email and Chat preferred Mode of Communication scores ranged from 1 to 5 points, with a mean of 3.6 points and standard deviation of 0.9 points. Email and Chat preferred Mode of Communication was coded as 1 = Yes and 0 = No.

**Table 42: Mode of Communication Email and Chat logistic regression with National Culture variables including Power Distance, context, time, humane orientation, gender egalitarianism**

Predictor	B	Wald's $\chi^2$	Df	P
Gender Egalitarianism	-0.0600	0.3239	1	0.5693
Total Time	0.0104	0.0165	1	0.8978
Total Context	0.00342	0.0160	1	0.8994
Total Power Distance	0.1039	3.2411	1	0.0718
Total Humane Orientation	0.0445	0.5342		0.4648
<b>Overall model evaluation</b>				
Test		$\chi^2$	Df	P
Likelihood ratio test		4.4264	5	0.4898
Score test		4.5078	5	0.4788
Wald test		4.3981	5	0.4936

According to the model, the log of the odds Email and Chat Mode of Communication was positively related to Context, Time, Power Distance and Humane Orientation scores ( $p < .05$ ) and negatively related to Gender Egalitarianism ( $p < .05$ ). The overall model evaluation of the model including the likelihood ratio, score, and Wald tests. All three tests yield very similar conclusions for the present data, namely, that the logistic Model presented was more effective than the null model.

The statistical significance of individual regression coefficients (i.e.,  $\beta$ s) is tested using the Wald chi-square statistic. According to Table 42, Power Distance was significant predictor of Email and Chat Mode of Communication ( $p < .05$ ). The test of other NC predictors was non-significant. The later suggest that they do not have any effect on Email and Chat mode of communication.



## 5. Results

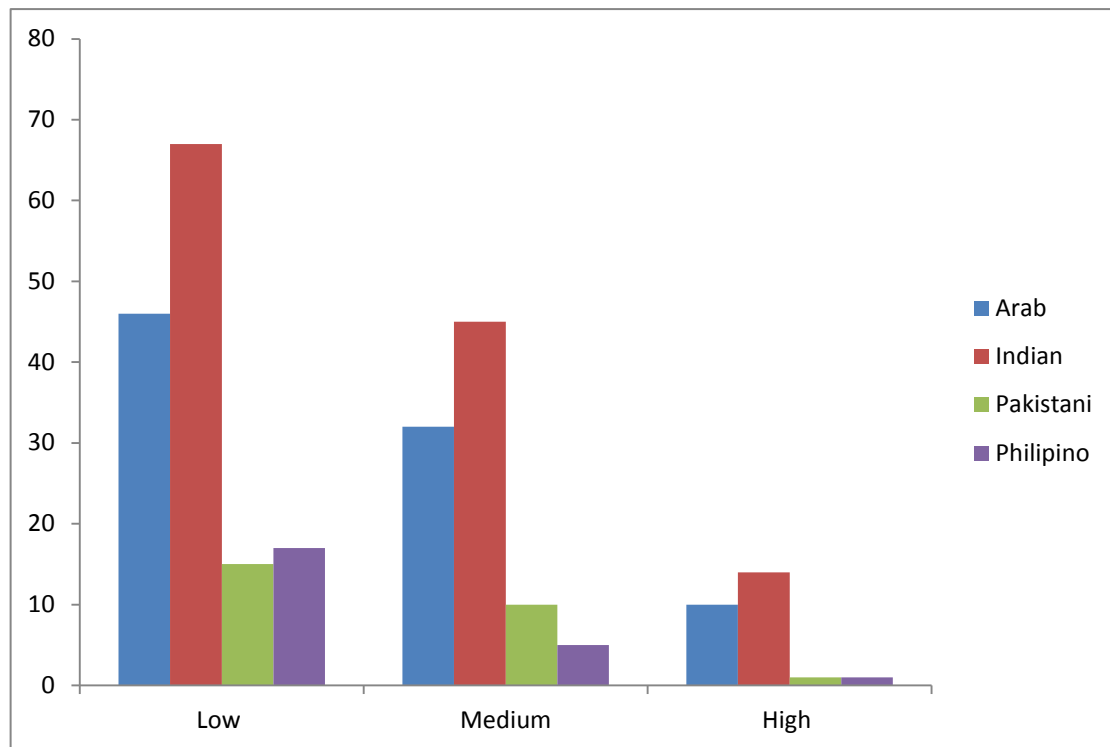
This chapter focuses in different results of arising from analysis of the data of Uncertainty Avoidance and Individualism-Collectivism dimensions. With reference to the previous chapter, both of these dimensions have reported lower scores compare to others. Keil et al., (2000) point out that the Cronbach's Alpha for the acceptable of a value of 0.6. However, slightly lower score might be accepted for exploratory research. In addition, given preponderance of the hypotheses addressing issues of the Uncertainty Avoidance and Individualism-Collectivism dimensions, it was agreed with the dissertation's supervisor to accept these dimensions for further analysis for exploratory research proposes. First, Pearson chi-square test is performed to investigate the difference between Arab, Pakistani, Indian and Philipino samples. Second, relationships between KS variables and the two NC variables- Uncertainty Avoidance and Individualism-Collectivism- are inspected using Spearman's rho correlations. Finally, PCA is performed on initial NC variables.

### 5.1 Cultural Orientation for Uncertainty Avoidance and Individualism-Collectivism dimensions

Again a 4x3 cross-tabulation examined responses for Uncertainly Avoidance variable (Table 43) and Figure 24 was created for further visual clarification. Results show that all four samples have scored low in Uncertainly Avoidance variable. This was also found non-significant ( $p>0.05$ ) by chi-square test ( Appendix 10).Therefore, all the groups do not differ on this variable.

**Table 43: Uncertainty Avoidance scores for Arab, Indian, Pakistani and Philipino**

Identification/Uncertainty Avoidance	Low	Medium	High	Total
Arab	46	32	10	88
Indian	67	45	14	126
Pakistani	15	10	1	26
Philipino	17	5	1	23
Total	145	92	26	263

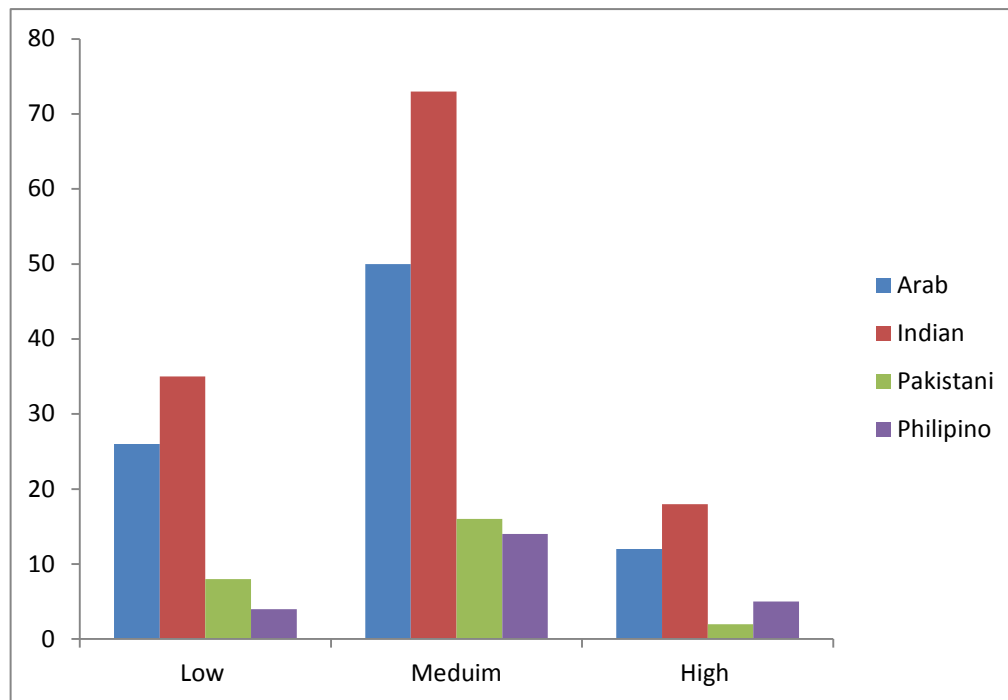


**Figure 24: Uncertainty Avoidance scores for Arab, Indian, Pakistani and Philipino**

With reference to Table 44 and Figure 25 the majority of Arab, Pakistani and Philipino scored medium in Individualism-Collectivism variable. Chi-square test (Appendix 3), was found non-significant ( $p > 0.05$ ). Thus, no difference was found between the four groups.

**Table 44 : Individualism-Collectivism scores for Arab, Indian, Pakistani and Philipino**

Identification/ Collectivism	Individualism- Collectivism	Low	Medium	High	Total
Arab		26	50	12	88
Indian		35	73	18	126
Pakistani		8	16	2	26
Philipino		4	14	5	23
Total		73	153	37	263



**Figure 25: Individualism-Collectivism scores for Arab, Indian, Pakistani and Philipino**

## **5.2 The link between Knowledge Sharing variables and National Culture variables**

Relationships between Knowledge Sharing variables and National Culture variables were examined using Spearman's rho correlations ( Table 45 and Appendix 11). Individualism-Collectivism associated negatively with Subjective Norms ( $r = -.134, p < 0.05$ ). In addition, a negative relationship was found between Individualism-Collectivism and Subjective Norms ( $r = -.166, p < 0.01$ ). Uncertainty Avoidance correlated negatively with Extrinsic Motivation ( $r = -.138, p < 0.05$ ). Uncertainty Avoidance negatively associated with Social Network ( $r = -.152, p < 0.05$ ) and KS globe ( $r = -.131, p < 0.05$ )

**Table 45: Spearman's rho Correlations for Knowledge Sharing variables and National Culture variables**

	Time	Context	Power Distance	Humane orientation	Gender Egalitariansim	Individualism-Collectivism	Uncertainty Avoidance	NC Global
<b>Intention</b>								
<b>Subjective Norms</b>			.137*			-.134*	-.138*	
<b>Extrinsic Motivation</b>		.293**		-.148*		-.166**		.131*
<b>Knowledge Ownership</b>		.229**	-.179**		-.242**			
<b>Social Network</b>				-.182**			-.152*	
<b>Usefulness of Technology</b>								
<b>Communication- Face-to-face</b>			.129*					
<b>Communication- Email and Chat</b>	.147*	.228**		-.176**				.143*
<b>Communication-Telephone</b>				-.143*				
<b>KS Global</b>		.237**		-.213**			-.131*	

Note:

\*\*, Correlation is significant at the 0.01 level (2-tailed).

\*, Correlation is significant at the 0.05 level (2-tailed).

### **5.3 Principal Component Analysis (PCA)**

30 items of the NC scale were subjected to PCA (Appendix 12). Before performing PCA the suitability of data for factor analysis was assessed. Inspection of the correlation matrix revealed the presence of many coefficients of .3 and above. In addition, Kaiser-Meyer-Olkin value was 0.713 (above 0.6) and the Barlett's test of Sphericity reached statistical significance, supporting the factorability of the correlation matrix.

Principle component analysis revealed the presence of ten components with eigenvalues exceeding 1, explaining 15.6%, 8.3%, 6.9%, 5.9%, 5.3%, 4.5%, 4.3%, 4.0%, 3.9% and 3.4% of the variance respectively. An inspection of the screeplot revealed a break after the second component; therefore, it was decided to retain two components for further investigation. Varimax rotation was performed to aid the interpretation of these two components (Table 46). The two - component solution explained a total of 24.0% of the variance, with component 1 contributing to 13.7% and component 2 contributing to 10.2%. The items loadings indicates that Component 1 includes items of Context, Time and Uncertainty Avoidance items and thus it was named as Context, Time and Uncertainty Avoidance whereas Component 2 contains Time, Humane Orientation and Individualism-Collectivism items, therefore, it was renamed to "Time, Humane Orientation and Individualism-Collectivism".

**Table 46: Rotated Component Matrix for National Culture Items**

NC Items	Component	
	Context, time and uncertainty avoidance	Time, Humane Orientation and Individualism-Collectivism
Culture:Context:Eleven	.591	
Culture:Context:Five	.589	
Culture:Context:Three	.568	
Culture:Context:Thirteen	.563	
Culture:Context:One	.557	
Culture:Context:Nine	.538	
Culture:Context:Forteen	.536	
Culture:Context:Eight	.525	
Culture:Context:Seven	.511	
Culture:Context:Ten	.509	
Culture:Context:Twelve	.495	
Culture:Context:Four	.465	
Culture:Context:Six	.402	
Culture: Uncertainty Avoidance One	-.303	
Culture:Power Distance Hofstede : Three		
Culture:Context:Two		
Culture:Time:Two		.721
Culture:Time:Three		.717
Culture:Time:One		.703
Culture:Time:Four	.327	-.532
Culture: Humane Orientation One		-.396
Culture: Humane Orientation Two		-.378
Culture: Individualism-Collectivism Three		-.321
Culture: Individualism-Collectivism Four		-.313
Culture: Individualism-Collectivism One		-.305
Culture:Power Distance globe :One		
Culture:Power Distance globe :Two		
Culture: Individualism-Collectivism Two		
Culture: Uncertainty Avoidance Two		
Culture: Gender Egalitariansim		

## **6. Discussion**

In this chapter, the results of this dissertation are compared to previous research related to the similar topic investigation in order to find the similarities and differences for both NC and KS. The evidence supporting and contradicting for the propositions generated from the literature review is discussed. Differences in KS ratings are acknowledged and explanations given. Finally, the study limitations of the empirical research for this dissertation are identified.

### **6.1 National Culture Orientation**

Comparing the results from the previous chapter with the literature that has been researched there are a few similarities and some major differences that should be noted. Four major explanations for these findings can be given. First, unlike traditional projects, the nature of global projects is a new phenomenon with a limited research. Evaristo and Fenema (1999) pointed out new challenges in project management research and practice is arising due to the emerging trends of projects such as global projects. Second, cultural changes are apparent in the Gulf region. Faghali (1997) argues that recent social change due to globalization and the opening of international companies have had a direct impact explaining many of the changes in national culture. Third, the UAE has undergone tremendous economic transformation since 1971 when the economy was based primary on fishing, pearling and limited local agriculture. Since then, the modern economic structure of the country is now built on the basis of oil and expatriates, with a predominance of foreign workers who share a high percentage of employment on the labour market. Such remarkable progress in the economy can be expected to influence the NC (Weinshall, 1993). With reference to the result chapter, the majority of participants studied in this dissertation were aged between 25-35 years old. Thus, they would be more affected by the economic boom in contrast to older generations. Fourth, the NC measures used have received several criticisms from researchers which will be discussed later.

### **6.1.1 Polychronic and Monochronic**

Monochronic refers to the ability to do one task at a time whereas Polychronic involves the ability to perform multiple tasks simultaneously. Dissertation outcomes demonstrated that the Arab, Pakistani, Indian and Philipino respondents scored high on the Monochronic scale. Prior research concerning Polychronic and Monochronic orientations suggests that Arab, Indian, Pakistani and Philipino are considered as Polychronic rather than Monochronic. A study found that traditional Asians such as Pakistani, Indian and Philipino have the ability to perform multiple tasks simultaneously. However, according to their cultural values it is inappropriate to do multiple tasks concurrently. Rather, it is more respected in their culture to undertake one task at a time. On the other hand, modern Asians are found to be in the middle of the Polychronic and Monochronic continuum. Although such differences may be considered abnormal within one society, business globalization has to some extent changed an individual's perception of time (Martin and Chaney, 2006).

A study was carried out by Tinsley (1988) in which she studied 116 Japanese managers, 157 German managers, and 123 Americans managers. She found that American managers preferred to pursue multiple tasks simultaneously which is a major trait of being Polychronic. Her findings contradict strongly with Hall (1983) and Conte et al.'s, (1999) findings where they describe the American as being Monochronic. Bluedorn (1998) pointed out that such conflict in findings suggest that Polychronic and Monochronic orientation is specific to a particular organization, industry or social group. The later phenomenon might be explained by the fact that the regional and national cultures have emerged over time and is a consequence of the globalization of the industry such as multinational companies operating across diverse national cultures (Manria and Manrai, 1995).

As mentioned previously, this dissertation's results show that the Arab, Pakistani, Indian and Philipino respondents who work in global projects scored high on the Monochronic scale.



However, research has found that time discipline has shifted with the globalization of business especially when working in a complete or partially virtual environment. As mentioned previously in the literature review chapter, global projects require individuals to work on several activities at once and across time horizons. Therefore, it could be argued that being Monochronic is not appropriate for any global projects environment (Lee and Leibenau, 2002).

### **6.1.2 Power Distance**

The majority of Arab, Pakistani and Philipino scored high in Power Distance whereas the majority of Indian scored medium on Power Distance. Hofstede's findings suggest that Arab, Indian, Philipino, and Pakistani scored high in Power Distance. However, Arab, Indian and Philipino have scored high on Power Distance in the GLOBE study. Application of chi-square test was found to be non-significant ( $p>0.05$ ). Thus, no significant difference has been found between the four groups. Therefore, we may assume that the four groups have high Power Distance. This consequently implies that Arab, Indian, Philipino, and Pakistani are less likely to accept opinions, expressions and questioning of their leaders (Hofstede and Hofstede, 2005). Becker (2004) suggests that authority is highly respected in Arab countries and a hierarchical structure is likely to be established. On the other hand, Indian people, especially the Hindus, have a strong hierarchical structure called the caste system.

### **6.1.3 Humane Orientation**

The Humane Orientation concept is related to the degree that a society or organization encourages and rewards people for being fair, friendly, generous, kind and caring towards others. Thus, a highly humane orientated cultures would be categorized by care, tolerance and fairness towards others, whereas low humane orientated cultures would have behaviors such as lack of consideration and high expression of self-interest (House et al., 2004).

The results show that all the four samples scored medium on the Humane Orientation variable which means that they would have a mixture of Humane Orientation behaviors including high and low dimensions. However, chi-square test suggests that the four groups differ on the Humane Orientation variable. Thus, the four cultures will be different. Such a difference could be attributed to the quality of life, human and resource practices, advanced technology, social relations and social support in all forms including support from supervisors, peers, leaders, subordinates, friends and family members. All of these previously mentioned factors impact on the individual's human orientation (House et al., 2004).

The GLOBE study found that Arab, Philipino and Indian scored high in Humane Orientation. However, Philipino and Indian have scored even higher than Arab. A study was carried out by Gupta et al., (2002) investigating several aspects of NC dimensions including Power Distance and Humane Orientation in the Southern Asia cluster consisting of India, Indonesia, Iran, Malaysia, Philippines, and Thailand. The study gave an example of Humane Orientation in the Philippines. The authors have stated that in rural Philippines, Philipino would offer help to others such as building a house without expecting anything in return. In Philipino society especially among the poor population, gratitude and appreciation are considered as highly honored traits.

"Hofstede 2001 identifies toughness and tenderness as a component of his masculinity versus femininity dimension, as measured with his MAS Index. On the other hand, he uses this dimension to refer to the distribution of emotional roles between genders, asserting that his MAS Index also measures materialistic orientation and success striving. Although the index includes and is confounded by several cultural variables, it is similar to GLOBE's Humane Orientation dimension in that cultures that score low on the MAS Index are considered to be as relationship oriented as in high humane-oriented societies" (House et al., 2004, p.566). Within this described context, Pakistan has a middle score in MAS Index and thus it would have a medium Humane Orientation. Nevertheless, Hofstede's study has been criticized since his sample mainly

consisted of males (Myers and Tan, 2002). Thus, one could argue that the result of this scale might constitute an inappropriate basis from which to generalize.

#### **6.1.4 Context**

Context refers to the "extent to which the context of a message is important as the message itself" (Nardon and Steers, 2009, p.5). Hall and Hall (1990) have suggested that cultures are classified as high and low context. Hall (1976, p.79: cited in Cardon, 2008) defined high and low culture as follows:

"A high - context (HC) communication or message is one in which most of the information is either in the physical context or internalized in the person, while very little is in the coded, explicit, transmitted part of the message. A low-context (LC) communication is just the opposite; i. e., the mass of the information is vested in the explicit code".

In general, studies assume that Arab countries would be categorized as high context (Hall and Hall, 1990). A study by Koeszegi et al., (2004) found out that Indian people are considered as high context. However, the results show that all four samples scored medium on the context culture variable. A recent study by Richardson and Smith (2007) revealed that there are numerous studies that have acknowledged the US is categorized as low context and Japanese as high context. However, in fact no significant differences were found in this study (Japanese:  $M = 3.00$  and American:  $M = 2.84$ ). In addition, the Japanese and American scored medium on the scale. The study concluded that the differences between being from high context or low context are overestimated. The authors stated that there is general assumption in academic research that US culture is categorized as higher context culture in comparison to Japan. However, there is a lack of statistical tests to confirm this assumption.

In addition, Trompenaars's (1994) rankings (cited in Cardon, 2008), found that United Arab Emirates and Japan are ranked as low context countries. Whereas, he found that the UK ranked lower than Germany. All of his rankings contradict with Hall's ranking as well.

The variance in the results including prior research and the dissertation findings can be credited to three major reasons. First is the ability of the individual to differentiate between the preference and the practice of the context. For example, in today's world, an employee who works in multinational company with multiple offices around the world might prefer to communicate with his co-workers face-to-face. However, the external environment creates a geographical distance which forces the employee to communicate virtually such as via emails and conference videos. In support of this argument, Guo and D'Ambra (2009) suggest that there is a direct impact of NC on the individual preference to use technology such as in the mode of communication. However, an organization culture would more likely have a greater impact in imposing the most widely used mode of communication.

Second, the major movement in globalization has forced individuals to change their ways of communication. Guo et al., (2001) investigated the role of culture in media choice behavior within multinational organizational (MNO) contexts, their study revealed that globalization has exposed employees in MNOs to communicate beyond their traditional ways.

Third, there is a lack of validation of the low and high context model. This could be attributed to the fact that most of the research has limited their studies to China and US. Thus, to validate the concept of context empirical studies need to continue to expand the prior findings to other cultures (Cardon, 2008).

This dissertation's findings found that Arab, Indian, Pakistani and Philipino scored medium in Context. Earlier in the literature review chapter, it was mentioned that BankCo use a mix of mode of communication both virtual and non-virtual in global projects. Being in mid-point of context scale confirm the previous statement. Nevertheless, Toomey (1988) note that high-and low-context cultures demonstrate preferences for communication styles such as face-to-face communication or email. Richardson and Smith (2007) have examined the influence of high/low-context culture and Power Distance in choice of communication media. The study

found that Americans prefer the email mode of communication whereas Japanese rated face-to-face communication, telephone, fax, and letter higher than did Americans.

This dissertation has looked at the preferred mode of communication. With reference to Table 47, the mean scores for all the samples, suggest that Arab, Indian, Pakistani and Philipino prefer face-to-face communication followed by Email/Online Chat and Telephone in carrying out their global projects.

**Table 47: Preferred Mode of Communication for Arab, Indian, Pakistani and Philipino**

Identification/Communication	Face-to-Face	Email and Chat	Telephone
Arab	4.295454545	3.613636364	3.159091
Indian	4.206349206	3.634920635	3.222222
Pakistani	4	3.5	3.269231
Philipino	4.217391304	3.47826087	3.26087

### 6.1.5 Gender Egalitarianism

Gender Egalitarianism refers to the degree in which gender differences are minimized (Nardon and Steers, 2009, p.8). Thus, a high score in Gender Egalitarianism indicates equal rights for women in authority positions, less occupational sex segregation and equal opportunities in education whereas a low score points to low participation of women in authority positions, higher occupational sex segregation and lower chances for education (House et al., 2004).

In this dissertation, the majority of Indian and Philipino scored high in Gender Egalitarianism whereas the majority of Arab and Pakistani scored medium on Gender Egalitarianism. However, chi-square test was found to be non-significant ( $p > 0.05$ ). Thus, no difference occurred between the four groups for this cultural dimension. The GLOBE study found that Arab scored low in gender Egalitarianism whereas Indian and Philipino scored medium. In a similar vein, Hofstede investigated the similar concept called "Masculinity/femininity", his findings suggest that Arab, Indian, Philipino and Pakistani are described as having relatively masculine cultures.

To some extent the results of the dissertation's findings contradict with prior research. Nevertheless, the results suggest that on the scale of medium to high in gender egalitarianism participants do not feel that male have more participation in the organization compared to female. One possible explanation for such results could be explained by the economic development of the UAE. As has been noted earlier, the country has undergone enormous transformations during the past three decades due to the oil discovery. The transformation of its economic structure over the years can be perceived from the changing share of economic sectors in total GDP. The most notable change in the progress of development is in the share of oil and non-oil sectors in the proportion of total GDP. This transformation allows more opportunities for women to participate in the workforce. Past research suggests that economic growth creates more opportunities for women to have a role on a higher scale. Researchers argue that economic development improves many aspects of society including women and disadvantaged groups such as minorities (Moore and Shackman, 1996; Nuss and Majka,1983).

## **6.2 Relationships between Knowledge Sharing Variables and National Culture Variables.**

The main aim of this dissertation is to investigate the influence of NC on KS in global projects. The NC findings of this dissertation were also compared against the propositions made in the literature review in order to ascertain their relevance and application. Table 48 indicates whether they are compatible. Nevertheless, this dissertation has found new relationships that previous research has not discovered. The later is an indication that there is a need for more research in this area.

**Table 48: The Accuracy of Knowledge Sharing and National Culture Propositions**

<b>Number</b>	<b>Proposition Details</b>	<b>Correlation according to this dissertation</b>
1	Intention correlates with Individualism-Collectivism	Unsupported. Intention related only to mode of communication- email
2	Usefulness of Technology links to Uncertainty Avoidance	Unsupported. Usefulness of technology did not relate to any of the NC dimensions
3	Usefulness of technology relates to Context	Unsupported
4	Usefulness of Technology connects to Time (Monochronic/ Polychronic )	Unsupported
<b>5</b>	<b>Extrinsic Motivation correlates with Individualism-Collectivism</b>	<b>Supported. Additionally, relationships were found with Context, Humane Orientation and Individualism-Collectivism</b>
6	Social Network relates to Individualism-Collectivism	Unsupported. However, it correlated with Humane Orientation and Uncertainty Avoidance
7	Social network correlates with Power Distance	Unsupported
<b>8</b>	<b>Social Network connects to Uncertainty Avoidance</b>	<b>Supported</b>
9	Knowledge Ownership relates to Humane Orientation	Unsupported. But other relationships were found with Context, Power Distance and Gender Egalitarianism
10	Knowledge Ownership correlates with Uncertainty Avoidance	Unsupported
<b>11</b>	<b>Mode of communication interacts with context</b>	<b>Supported. It also connected to Time and Humane Orientation</b>
12	Subjective Norms connects to Gender Egalitarianism	Unsupported. But, it related to Power Distance, Individualism-Collectivism and Uncertainty Avoidance
13	Intention related to Gender Egalitarianism	Unsupported

Although several relationships were not supported numerous relationships were found. In addition, logistic regression tests found that Context and Power Distance were significant predictors of Knowledge Ownership. Context also was found to be a significant predictor for Extrinsic Motivation. Power Distance was a significant predictor for Subjective Norms. All of these above mentioned logistic regressions tests confirm the new relationships that have been

found. However, Power Distance was a significant predictor of Intention. Nevertheless, no relationship was found from the correlation test. The later discrepancy might be explained by the fact that the p value was lower than the prior logistic regression tests performed. In addition, Power Distance was found to be a significant predictor for Mode of Communication Email and Chat.

### **6.3 Differences between Arab, Indian, Pakistani and Philipino rating for Knowledge Sharing variables**

Kruskal-Wallis Test findings suggest that Arab, Indian, Pakistani and Philipino do not differ on a significant level in all of the KS variables except for Knowledge Ownership and Extrinsic Motivation.

There was a statistically significant difference between Arab and the other three groups in Extrinsic Motivation; Arab are superior in Extrinsic Motivation. The results suggest that Arab are more willing to share their knowledge if offered an Extrinsic Motivation to do so. Previous research studies have found that reward incentives in relationship to KS to be insignificant or negative (Bock et al., 2005). However, other studies have found that Extrinsic Motivation is effective to elevate employees' KS behavior (Bartol and Srivastava, 2002; Hyoung and Moon, 2002).

The logistic regression results suggest that that Context also was found to be a significant predictor of Extrinsic Motivation. The Arab sample correlation test reveals that there is a positive relation between Extrinsic Motivation and Context. As mentioned previously, Arab have scored medium on Context. However, they prefer to communicate verbally face-to-face. A study done by Skok and Tahir (2010) suggest that Arab share their knowledge in verbal communication face-to-face by 97%. However, BankCo mostly use virtual communication in carrying out their projects. Weir and Hutchings' (2005) study found that Arab are not influenced



by an organization's rewards but they are more likely to share their knowledge if they trust the person they are going to share their knowledge with. Hassan and Alsae'd (2005) found out Arab might be extrinsically motivated to share their knowledge if they were forced to do so by their organization. For example, they have pointed out that in a Jordanian bank, the human and resources have linked KS goals with employee's yearly appraisals. Employees usually receive their bonuses according to their performance thus this might explain why Arab in this sample have rated higher on extrinsic motivation. Osman (2007) looked at the effectiveness of appraisal systems and their impact on KS in the Lebanese Banking sector and the findings suggest that extrinsic rewards need to be used with caution in practice especially with appraisal systems. Another study by Al-Alawi et al., (2007) conducted in Bahrain from the public and private sectors aimed at investigating the role of certain factors- including rewards- in the success of KS. This study found that rewards and face-to-face communication positively related to KS in organizations. Al-Alawi et al., (2007) argue that technology is important to be used as a main tool of communication when sharing knowledge. However, given the heritage of Arab they prefer face-to-face communication to transfer their knowledge. Skok and Tahir (2010) point out that verbal communication including face-to face communication in the Arab context is related to a core issue in lack of technology familiarity. Thus, more training needs to be provided to Arab in addition to providing more investment in KS systems (Mohamed et al., 2008). In a similar vein, a recent study revealed that Arab managers are willing to share their knowledge more if the organization offers them both monetary and non-monetary rewards (Almahamid and McAdams, 2010).

Another statistically significant difference between Arab and the other three groups was Knowledge Ownership. The findings suggest that Arab will have a higher Knowledge Ownership than other three samples. There are many reasons that have been found from prior research such as short-term contracts, heavy reliance on verbal communications, lack of education about KS and lack of trust.

One of the major interesting findings of why Arab are not sharing their knowledge is job security. Research has found that job security has a direct impact on KS (Riege, 2005). Within the UAE context, there is an over- reliance on foreign workers in the private sector. Al-Ali (2008) argues that most of the Arab foreign workers are employed on temporary contracts. Thus, it is expected that they will have low job security thus in return they will not be predisposed to share their knowledge fully in order to protect their jobs. Skok and Tahir's (2010) findings suggest that 90% of the Arab in their sample have indicated that short-term contracts act as a major obstacle to share knowledge.

Trust was also identified as a main barrier of Knowledge Ownership in Arab culture. Weir and Hutchings (2005) suggest that Arab culture is built around the trust concept. Thus, they become very cautious to share their knowledge with people that they do not have a trusting relationship with. To support the previous notion Mohamed et al., (2008) refers to this by illustrating the historical Arab KS practices in which the tribal knowledge is shared from one generation to another verbally with the people whom they know and have built relationships with over a long time. Al-adaileh (2011) identified the main factors of KS which arise as a result of the Arab culture including trust, collaborative working environment, shared vision and management practices. Among the previously mentioned factors, trust attributes have a significant direct effect on KS and have ranked the highest in comparison to other studied factors. This can be justified based on the argument which emphasizes that the trust element will allow Arab to socialize and know people better and this will facilitate KS processes.

With reference to the logistic regression tests results, it was found that Context and Power Distance were significant predictors of Knowledge Ownership. As mentioned before Arab were found to be high in Power Distance. Al-Busaidi et al., (2010) state that the Arab culture considers knowledge as power and something that should be treated with privacy. Therefore,

Arab are less likely to share their knowledge with other people in order not to lose the power that they have. Ardichvili et al., (2006) pointed out that KS may be inhibited in cultures that are categorized by high Power Distance such as Chinese and Arab which place high respect on power and hierarchy. Context, on the other hand, will affect Knowledge Ownership. This might be explained by many interrelated factors that have been mentioned previously. It is expected, for example, that Arab prefer face-to face communication to share their knowledge. However, email is the most frequently used medium in BankCo. Thus, it can be expected that Arab will share their knowledge less.

Although there were agreement and disagreement between the findings and prior research on Arab culture, however, more research needs to be conducted in this area in order to gain more meaningful insights. Indeed, there are few studies that have investigated knowledge management in Arab countries (Hassan & Alsae'd 2005; Al-adaileh, 2011). Al-Busaidi et al., (2010) state that there are a very limited studies that have been conducted to investigate KS factors prevalent in the Middle East.

## **6.4 New Factors**

PCA for the KS variables (29 items) revealed that three major factors were found-See Table 49. Factor one was somehow not clear as it contained most of the KS variables factors. However, factor two and three yielded interesting results. For example, factor two, "knowledge ownership and communication" which included all the four items of Knowledge Ownership and Preferred Mode of Communication two- email and Chat. The later was found prevalent in the Arab sample results as mentioned previously.

Factor three contained all the Extrinsic Motivation items. The later suggest that the results will be affected by Factor three which was seen in the results. For example, when investigating the differences between the Arab, Pakistani, Indian and Philipino in KS ratings, only Extrinsic Motivation and Knowledge Ownership were found to be different.

**Table 49: Knowledge Sharing factors corresponding to initial Knowledge Sharing Variables**

<b>Factor</b>	<b>Variable</b>
<b>Knowledge Sharing</b>	Usefulness of Technology (All 4 items)
	Subjective Norms (All 6 items)
	Social Network (All 4 items)
	Intention (All 4 items)
<b>Knowledge Ownership and Communication</b>	Preferred Mode of Communication- Email and Chat (One item)
	Knowledge Ownership ( All 4 items)
<b>Extrinsic Motivation</b>	Knowledge Ownership ( All 4 items)
	Extrinsic motivation (All 5 items)

The 22 reliable items of the NC were found to divide into two major factors-See Table 50. Factor one includes all of the Context items whereas factor two contains all 3 time items, all 2 Power Distance items and all 2 Humane Orientation items. Therefore, it was renamed as "Power Distance, Time and Humane Orientation". In logistic regression tests, Context was a significant predictor of the KS factors including Knowledge Ownership and Extrinsic Motivation. In addition, Power Distance was a significant predictor for Knowledge Ownership and Subjective Norms and Intention. However, it should be pointed out that the results of Factor two was unexpected since Power Distance relates to leadership-subordinate relationships, Time is measuring time orientations and Humane Orientation concerns care for others versus self-interest.

**Table 50: National Culture Factors corresponding to initial National Culture variables**

<b>Factor</b>	<b>Variable</b>
<b>Context</b>	Context (All 14 items)
<b>Power Distance, Time and Humane Orientation</b>	Time (All 3 items)
	Power Distance (All two items)
	Humane Orientation (All two items)

## **6.5 Limitations of the Study Data**

### **6.5.1 Reliability and Normality**

Two major issues have been identified in this dissertation. First, the reliability of the two NC dimensions namely: Uncertainty Avoidance and Individualism-Collectivism. With reference to the results chapter, both of these dimensions have reported lower scores compared to others. Keil et al., (2000) state that the Cronbach Alphas for an acceptable reliability value is 0.6. However, a slightly lower score might have to be accepted for exploratory research. Thus, both of these dimensions were investigated. However, they were reported in a separate chapter. It should be acknowledged that some of the prior research reported issues with these dimensions in relation to their reliability coefficients. For example, Noordin and Jusoff (2010), found in their study that the reliability coefficient of Individualism-collectivism measure was 0.54. Morris et al., (1998) report that the Individualism-collectivism reliability results appeared to be low in many empirical studies conducted. One of the explanations that they have provided is that Individualism-Collectivism is mainly about values and social behaviours and over the time external factors such as immigration, interracial marriages and studying abroad may change those values and social behaviors. Fiske (2002) has questioned the validity of the individualism-collectivism measure used, arguing that cross-cultural researchers should treat individualism-collectivism as a personal preferences rather than culture behaviors, norms and traditions.

Uncertainty Avoidance was also reported in this study with low reliability. The Uncertainty Avoidance dimension was derived from House et al., (2004) which originated from Hofstede's work. Although, Hofstede is acknowledged in the academic community for his pioneering investigation in cross-cultural research, however, there are many studies that have questioned the validity and reliability of his models and concepts. For example, Churchill (1979) states that despite the popularity of Hofstede's framework and common usage across many disciplines there is a lack of testing of the validity and reliability in the measures. An extensive study by Soondergaard (1994) for published and unpublished materials that have used Hofstede's cultural

framework were investigated for their validity and reliability, two-thirds of the studies reported low reliability in the uncertainty avoidance measure.

Myers and Tan (2002) have heavily criticized Hofstede's cultural model arguing that the model might be widely acceptable in research solely due to its theoretical appeal. They argue that Hofstede's model should not be generalized across cultures given the fact that there was limited demographic variation in the population surveyed. For example, the sample was mainly biased towards male population and with a limited mixture of age range. In addition, the sample was limited to one multinational organization (IBM) which raises concern whether the results in Hofstede's study reflected NC differences in countries or in the IBM organization.

In addition to the reliability issues identified above, whenever normality is violated, non-parametric tests should be performed on the data.

### **6.5.2 The Temporal Nature of National Culture**

Hofstede claimed across his publications, that NC remains static. Recent research has stated that NC is a dynamic rather than static construct in which many factors could affect it including age, work organization and economy (Kahn, 1989).

With reference to the demographics of this dissertation's –Table 17- the majority of participants 69% were aged between 25-35 years old. This is a strong indication that this group is a young generation in which they might get more influenced by the international work environment. This young generation has grown up during a period of rapid economic and cultural change in the UAE. Thus, there is the possibility that there will be a further transformation in cultural values. Fiske (2002) advised that cross-cultural researchers need to rethink about how to classify cultures to include elements such as institutions and practices, economic systems, religion, kinship systems.

### **6.5.3 Biased sample due to the over-dominance of Expatriates in the UAE**

One of the main issues that is facing BankCo, UAE is the lack of multiculturalism. Although there are more than 50 nationalities, 61% are Asians – See Figure 17. This could be attributed to unbalanced demographics distribution in the UAE. According to a study by National Human Resources Development and Employment Authority (Tanmia), the UAE population is estimated around 7.5 million by end-2010. According to a recent study Euromonitor International's Future Demographic report for the UAE (Cited in Criselda, 2010), foreign workforce will rise from 79.7% in 2010 to 84.5% in 2030. Indians account for over 50% of foreigners followed by expat from Pakistan, Bangladesh, Sri Lanka, Philippines, Arab and Western. On the other hand, UAE nationals' population growth rate is very low due to the high cost of marriage.

Lack of UAE nationals presence in the private sector remains an issue especially that the UAE government have introduced a law in which 40% Emiratisation quota imposed on private companies. However, UAE nationals make up only 4% of the private sector workforce, compared to 52 % in government sector (Sambidge, 2010). This might be attributed to shorter working hours in the government sector, better job security, government benefits such as pension, education allowance and longer leave allowance.

Social experts have warned that the over-reliance on foreigners in the workforce will affect the social and cultural values of the UAE (Rosdenberg, 2011). For example, many of the UAE young generation communicate in English as their first language instead of Arabic. In addition, there is a predominance of western clothing, music and cultural values that are outsiders to UAE culture. This raises a major fear whether the UAE can maintain to preserve their traditions and values while flexing their economic muscles.

#### **6.5.4 Multiculturalism**

Fiske (2002) argues that many studies in multiculturalism have failed to compare cultures. He states that cultures cannot be classified as black and white but rather should consider other elements. Cohen (2009) pointed out that three types of cultures should be considered when comparing cultures including religion, socioeconomic status, and region within a country. Recent research studies have acknowledged that the contradictory results of some empirical studies in cross-cultural research results from ignoring elements such as ethnicity and education. For example, within the Arab world there are multiple ethnic groups such as Berbers, Assyrians and Cirassians (Kabasakal and Bodur 2002).

According to Sunil and Parashar (2010) India is a multi-religious, multi-ethnic, geographically and economically various country. Nevertheless, most of the studies treated India as a single national culture, i.e. GLOBE and Hofstede's studies. They have suggested that future research for India should consider other antecedents of culture such as language, colonization history, religion, economic systems, government systems and sex ratio. Two major factors have affected Indian culture especially Hindu. First, is the caste system in which people are classified according to their wealth. There are four major castes in which each caste have their own cultural values and traditions. Second are the educational reforms due to British colonization.

Pakistan on the other hand is known for unequal distribution of wealth which has a direct impact on social classes in Pakistan. These different social classes have different education, medical, lifestyle and residential areas. Such social classification will impact on the NC. A recent study by Ali et al., (2010) carried out a study in Pakistan to find out the impact of NC on organizational performance. The NC dimensions included; Power Distance, Collectivism, Masculinity, Uncertainty Avoidance and Long/Short-term orientation. Not surprisingly the study found out that there are people who were classified as individualistic and others as collectivist. This might result from the social class or religion cast (Sunni verses Shia). Khilji (2003) pointed out that



most of the prior research on NC related to Pakistan has ignored the impact of the British colonial legacy on Pakistani's NC.

Philipino society is also influenced by the social class which is based on national wealth. There are three major social classes rich class which represent 10% of the population and earn 90% of the country's wealth, followed by 20% of the middle class and 70% of lower or poor class (Wikianswers, 2009). Such disparities may influence the national culture. For example, as mentioned previously by Gupta et al., (2002) poor Philipino are expected to have a high Humane Orientation in comparison to rich people. In addition, the high poverty level and low income have forced many Philipino to immigrate to other countries especially the Gulf countries. For example, there are approximately 500,000 Filipinos working in the UAE and mainly in Dubai (Baldwin, 2010). Selmer (2002) pointed out that national cultures do change when people immigrant to other countries due to work organization, intermarriages and new societal formation.

#### **6.5.5 Survey Language options**

The Arab participants accounted for approximately 33% of the sample. However, the survey was available only in English for all employees including Arab due to lack of resources. For example, BankCo UAE server has the capacity only for the English language. Although this was known by the researcher before proceeding with this research, however, since English is the official language in this organization it was expected that Arab would not have difficulties in understanding the questions of the survey. Nevertheless, the researcher provided contact details in case anyone would need any clarification when her first language is Arabic.

#### **6.5.6 Focus on one case study organisation - BankCo**

One of the main limitations of this dissertation is that the data was collected only for one single bank instead of including other banks in the design. These findings might not be appropriate to generalize to other banks especially national banks as they operate differently than international banks. The limited time to complete this dissertation and access to such sensitive information were major obstacles to including other banks in the empirical research study.

## 7. Recommendations

Recommendations are presented in sections. First, recommendations for researchers are made concerning NC and KS. Second, recommendations for practitioners based on the findings of this dissertation are proposed. Then, suggestions for future research are given.

### 7.1 Recommendations for Researchers

**1. NC within the global projects context should be studied as a temporal nature rather than static. However, more exploration is needed for the concept of temporal nature.**

The dissertation found out that NC has a temporal nature within the context of global projects which could be affected by time, economy, status, gender, age and other factors. The temporal nature of the NC has impacted the results significantly. For example, the majority of participants were a young generation who are likely to get affected by the international work environment. Considering the temporal nature of the NC, it would be useful for researchers to investigate this concept in more depth.

**2. Due to the temporal nature of the NC, researchers should investigate the likelihood of integrating non-value dimensions and value dimensions.**

The temporal nature of the NC may also be explained by the nature of NC dimensions. Most of the NC dimensions including Kluckhohn and Strodtbeck, Hofstede, Hall, Trompenaars, Schwartz, and House and his GLOBE associates are value-based. These NC dimensions are not drastically different from each other in terms of basic concepts. For example, House and his GLOBE associates used five dimensions from Hofstede by keeping or alternating the concept's name. Due to the globalization of business and organizational culture, the value based view might not be appropriate to many studies including global project organization settings (Wei, 2007). Instead, non-value based NC dimensions such as Terpstra and Sarathy's model might be

useful. This model has combined values with non-values dimensions such as technology, education, religion, politics, material possessions and organization's social life. Therefore, there is a need to develop new theoretically-based cultural measurements due to the fact that culture changes over time (Straub et al., 2002). Therefore, it is recommended that cross-cultural researchers should investigate the probability of integrating non-value dimensions with value dimensions.

### **3. Cross national studies researchers are highly recommended to investigate the existing notion of sub-national cultures in a single culture.**

Most previous research has investigated NC as a single notion. However, this dissertation and some of the prior research have found that many national cultures will have sub-national cultures (i.e Kabasakal and Bodur, 2002; Sunil and Parashar, 2010). This regional diversity should be studied in at least two major ways. First to investigate NC at the individual level rather than focusing on a single culture. McCoy et al., (2005) argue that Hofstede's model has been used in almost all the disciplines including banking, however, they questioned whether these measures will remain constant over 30 years. In a similar vein in classical NC dimensions, Straub et al., (2002, p.8) state "These studies also develop generalizations for a given group within a country, therefore opening themselves to several criticisms. First, the group being studied may have self-selected into a particular function (e.g., programmers) and such self-selection could override some of the earlier group characteristics. Second, national groups change over time. Therefore, when current studies try to compare two or more cultures which may have changed in sundry directions (potentially bringing them closer or farther apart on the studied cultural dimensions), researchers are introducing confounds, potentially rendering culturally-based conclusions meaningless."

McCoy et al., (2005) have provided two forms of empirical evidences in which they have argued that single NC is not the solution for the new era of globalization. Taking a similar point of

view, Straub et al., (2002) suggest that the NC of an individual is not limited to NC values and beliefs that were proposed by previous researchers such as Hofstede, Hall and Trompenaars. But, it is a combination of national, organizational, professional values and behavior. They have suggested that new measurements at the individual's level are the solution to improved measurement of the NC.

**4. Another theoretical recommendation would be to measure the strength of certain cultural features or measurements.**

Straub et al., (2002) observed that in cross cultural studies researchers always assume that the NC of a selected country is similar to all individuals. However, this was found not accurate since many contradicting studies have been conducted including this dissertation findings have suggested the opposite. For example, Tinsley (1988) found out that Americans are Polychronic whereas prior research such as Hall, 1983 described the Americans as being Monochronic. Another example is Gupta et al., (2002) they found a variation of Humane Orientation between rural Philipino versus rich. Straub et al., (2002) argue that it is very common for many researchers to generalize based on previous researchers especially the ones who got the attention from academics. However, recent research has acknowledged variation in certain NC constructs. Thus, it would be more appropriate for cross-cultural researchers to introduce a measure in which they can test the strength of each NC measure in each studied culture.

**5. Knowledge concept needs to be defined from a theoretical perspective more precisely. Thus, it is recommended to define knowledge carefully and according to the aim of the study.**

In the knowledge management literature, it has been noticed that there is a problem in defining the term “knowledge”. The lack of universal definition of knowledge has impacted on accurately defining KS concept in return which was highlighted earlier in the literature. For example, the terms knowledge transfer and KS have been used interchangeably. Lack of defining knowledge

have also lead to serious criticisms (Alvesson and Karreman, 2001). For example, Wilson (2002) states that knowledge management is another management fad. It is believed that such variation is attributed to the evolving definitions of the word "knowledge", which in part might be related to the different backgrounds of the scholars.

#### **6. Researchers need to include more theoretical perspectives in studying the KS rather than limiting their studies to a limited number of theories**

Wang and Noe (2010), pointed out one-third of the studies related to KS are based on three main theories namely: reasoned action, social capital and network theories. Perhaps, researchers need to expand the theoretical perspectives used in studying KS such as social exchange theory. "Social exchange theory has been used to investigate perceived benefits and costs as well as the effects of organizational justice and trust on KS" (Wang and Noe , 2010, p.122). There are very few empirical studies that have examined this theory within the context of KS. In addition, the dissertation findings suggest that benefit and trust are related to KS especially with Arab people.

#### **7. More research is recommended to validate the KS factors identified in this dissertation**

The researcher has noticed that most of the literature related to KS factors are qualitative (Alavi and Leidner, 1999; Wasko and Faraj 2005); conceptual in nature (Markus, 2001); survey (Connelly and Kelloway, 2003; Kim and Lee, 2006; Ruggles, 1998); some lab experiments (Constant et al., 1994). From a theoretical perspective, this dissertation has contributed significantly in defining the term KS based on prior research and in-depth personal reflection. In addition, the dissertation advances prior research by combining the relevant KS factors to the study and adding other factors. The reliability results for the identified KS factors have scores ranging from 0.6-0.9. Therefore, this model can be considered as reliable and may be used in validating future research investigations.

## **7.2 Recommendations for Practitioners**

### **1. Managers should understand and be aware of the cultural differences in global projects.**

Within the context of the case study, people will interact with a large number of people across the globe to complete certain projects. These projects might continue from months to years. Thus, it will affect employee's behavior. Hunt (2002) suggests that it is very important for the managers who are participating in global projects to be aware of differences in NC. He mentioned that lack of acknowledgement of NC differences may lead to many problems such as conflict in management and working methods, lack of KS, misinterpretation of language and miscommunication.

Chevrier (2003) has looked at several strategies that could be employed in international project groups to cope with cultural diversity such as 1) not to pay attention to cultural differences; 2) strengthen team personal relationships by introducing social events; 3) frequent communications in understanding each other errors; 4) minimizing cultural misunderstanding by adopting a transnational corporate or professional cultures. Although these previous solutions might not to a certain extent resolve the issues of cross-cultural differences, Chevrier (2003) suggests that managers are not aware of better solutions as they are used to their traditional ways of dealing with cultural differences.

### **2. Managers should recognize the individual differences in motivation based on the cultural differences.**

In the previous chapter, the results showed that Extrinsic Motivation is a key to increase employee's KS especially Arab. Nevertheless, it is believed that intrinsic motivation which is derived from the passion, engagement, satisfaction, challenge, curiosity and enjoyment to do the work is also important in KS since other nationalities have rated lower on the scale of Extrinsic Motivation. Fielding (2008), suggest that monetary incentives should be part of the employee

recognition but not the only one. He argues that financial compensation have potentials drawbacks for employees' motivation and behavior. In regard to this, he argues that monetary incentives only have a short-term effect. On the contrary, autonomy, recognition, availability of training, support, employees' participation and involvement in taking decisions enhance KS between employees.

### **3. BankCo needs to develop a defined motivational system and practices based on the cultural differences in order to motivate employees to share their knowledge on a team level.**

Amabile et al., (1996) argue that individual differences in motivation should be acknowledged by the organization. Individual differences include job satisfaction, encouragement, positive team, healthy working environment, money, autonomy and freedom. In addition, previous research has also suggested that organizations should focus on enhancing both intrinsic motivation and extrinsic motivation especially with the Arab population (Almahamid and McAdams, 2010). One way that BankCo can stimulate employee's extrinsic motivation is to reform their yearly reward system. Research has indicated that national cultures prefer different types of reward. For example, Javidan and House (2001) suggest that American as being individualistic would prefer to be rewarded individually whereas Korean would favor to be rewarded on the team-level.

BankCo have a performance reward system which is an important motivator encouraging employees' performance and it comes in the form of a bonus on the individual level. There are two major issues with BankCo's performance reward. First, there are no clear criteria related to distribution of the bonus. This does not motivate the employees as they are not aware of what is expected from them in order to get a high bonus. Thus, it would be more appropriate and a win-win solution if the human resource management policy implements a set of criteria which the employee is aware of as targets for performance review. Second, the performance reward is



based on individual contribution rather than team contribution. Research has suggested that in order to increase the employee's KS it would be more useful to link the performance reward to the amount of the KS being shared at the team level. Milne (2001) argues that most of the monetary rewards are linked to only the individual level. Thus, it will force the individual to focus more on achieving his own target and competing with others. The later will impact KS between employees. Therefore, the managers are recommended to link each employee's goals to team goals.

#### **4. BankCo should introduce more training which is related to transformational leadership in order to increase individual's intrinsic motivation to share the knowledge.**

Individual intrinsic motivation could be stimulated through transformational leadership because of the inspirational traits that this type of leadership carries (Conger and Kanungo, 1998). Chun-Hsi Vivian Chen et al., (2009) have examined the effect of transformational leadership on intrinsic motivation from 50 different companies in Taiwan. The study found that transformational leadership has a positive effect on intrinsic motivation. Therefore, managers should be a good role model for employees, appreciate individual contribution and involve employees in taking decisions. BankCo should adopt new methods of motivating employees such as appreciation, recognition and acknowledgment of their KS (Anil and Gupta, 2007). BankCo has a learning center in which all the trainings are conducted. One of the ways to motivate people intrinsically is by introducing training related to effective leadership.

#### **5. BankCo should enhance face-to-face communication more through online conference calls and flat hierarchy through open plan offices and less physical barriers.**

Context was also highlighted as one of the most important factor in enhancing KS. The dissertation has found the employees prefer face-to-face communication in carrying out their projects. This is a strong indication that employees are more willing to share their knowledge

more by face-to-face communication. A study conducted by Lim et al., (2004: cited in Chaudhry, 2005) found out that employees are more likely to share their knowledge in the face-to-face context rather than through an electronic medium such as emails. It should be noticed that there is limited research that has investigated the difference between face-to-face communication versus using technology such as emails (Bordia et al., 2006).

Within the context of global projects in BankCo, both electronic and face-to-face modes of communication are used in projects. However, emails are used more than face-to-face. Face-to-face communication can be enhanced in two major ways. First, if the employees are located in different countries they can use online conference calls in which employees can see each other and share their knowledge more. Second, if the employees are located in-house, they can communicate face-to-face more frequently. One way to do it is to enhance communication through the physical layout. BankCo's physical work environment features are categorized with closed plan offices, traditional cell office areas, physical barriers between departments which are to some extent all features of hierarchical organizations (Boutellier et al, 2008). Davis (1984) and Donald (1994) suggest that several studies have found that the physical work environment of hierarchical organizations hinders many aspects including KS, communication and motivation. However, organizations with a flat hierarchy foster KS through open plan offices, less physical barriers that allow more sharing of ideas, easier links to decision makers and quick feedback process.

Boutellier et al., (2008) carried out an in-depth study by comparing two different office layouts for the same organization. Layout A is a traditional cell office and layout B is a multi-space office. The results indicate that employees communicate three times more in a multi-space layout than in a cell office layout. In addition, employees share ideas four more times in a multi-space office layout than in a cell office layout. Also, employee with multi-space office layout use internal email communication and phone 52% less than employee with a cell office layout.

Therefore, it would be preferable if the BankCo improve gradually the layout of the offices to more open areas. This could also help with enhancing the flow of information and knowledge throughout the organization.

**6. BankCo is recommended to initiate strategies to minimize knowledge ownership such as building trust, effective leadership, open communication and in-house training by employees.**

Another area of concern which was identified in this dissertation is Knowledge Ownership especially among Arab. Four major facilitators can be adopted in order to promote KS. First, promoting trust between employees. Sackmann and Friesl (2007) pointed out that trust is a major component for effective KS in multicultural teams. Trust in global projects remains a challenging task as it has to be built mostly at a distance. Trust may be linked to the NC. For example, Arab are more likely to share their knowledge if they trust the person. Within the context of global projects, establishing trust is difficult because team members are located in different locations and time zones and their interactions are mainly virtual. The role of effective leadership becomes critical in facilitating the development of trust such as enhancing open communication and clear guidelines about the needed work. Child (2001) argues that in global collaboration, trust encourages openness to share knowledge, creative problem solving and overcome cultural differences. Arino et al., (2001) have proposed that trust needs to be built on a personal level and through socializing between team members. Therefore, the project managers in BankCo need to encourage their employees to use live-chat facilities more and to introduce social events. Second, BankCo can introduce a new system called in-house training in which knowledgeable employees in a specific specialization can participate in giving training. The previous mentioned recommendation might be challenging because some of the employees perceive their knowledge as a personal possession rather than an organizational possession (Constant et al., 1994). Therefore, BankCo would need to customize a reward system for such employees whether its monetary or non- monetary dependent on employee's individual preferences. In addition to the rewards system, an evaluation survey should be distributed to all participants in order to evaluate the effectiveness of the delivery of training sessions.

### **7.3 Future Research**

The findings of this research highlight many potential directions for future research. This dissertation revealed an absence of previous research on KS in the differences between national cultures. Wang and Noe (2010) pointed out that the vast number of research studies examining the influence of NC on KS concentrated mostly on Western countries and China. This dissertation has contributed in expanding investigation of the phenomena to other cultures such as Middle East and Southeast Asia. Nevertheless, more attention needs to be given to other countries such as Africa and South America (Wang and Noe, 2010).

Exceptionally, this dissertation has contributed to defining the roots of global projects by extending prior research starting from investigating global organization management history, project typology on to the global projects literature. A critique of the Literature was made in the literature review chapter in which theoretical and empirical criticisms were assessed. There are two areas of great importance that should be considered for the on-going development and evolution of the global project management literature. First, researchers need to establish a universally distinguishable concept for global projects. Second, researchers should avoid an over-reliance on virtual work/teams/projects literature.

Another avenue for future research is to investigate the temporal nature of NC and what specific factors would influence phenomenon such as the ethnic and racial mix of the population. In countries such as the UAE in which 80% of the population are expatriate, this is expected due to continuing economic and social factors that the culture will not be static. One way to examine the temporal nature of NC is to investigate NC on the individual level from different generations and then compare them with each other.

In addition, conceptual and empirical work is needed to study the differences of NC dimensions in one culture. The later will help to overcome the multicultural limitations of this dissertation. There is a very limited research in which researchers have acknowledged cultural differences in a single culture (i.e. Wagner and Moch, 1986; Shamir, 1990).

Given the fact that national banks in the UAE perform better than international banks it would be a great opportunity for future research to conduct a comparison study for the same topic being studied in this dissertation between national banks versus international banks in the UAE. This might fully exploit the market potential within the country, and could, moreover, strengthen the international banks competitiveness at regional and international levels. In addition, it might alert the international banks decision-makers about what they could do to enhance their competitive advantage through implementing best practices in KS in global projects while considering cultural differences.

Despite the substantial criticisms that have been discussed in previous chapters in relation to Hofstede's dimensions, many studies have employed them. However, there is a lack of research investigating KS factors or practices in relation to Hall's cultural dimensions or Schwartz's cultural dimensions generally and especially in global projects. Future research in this area would be of great value if other NC variables such as language and ethnicity and KS factors that this dissertation did not address such as trust, anticipated reciprocal relationships, differences in processes of logic and thinking, perceived behavioral control and organizational culture. This could be applied to the research problem as a longitudinal or cross-sectional study.

Since the 1950s, project management has evolved to be incorporated in many areas including knowledge management (Morris et al., 2006). On the other hand, cross cultural research concerning cultural differences has also developed since the 1990s (Shaw, 1990). Nevertheless,

NC and its impact on project management including global projects has received comparatively little attention (Shore and Cross, 2005). Merging cultural theory including national, regional and organizational cultures with project management would open potential areas for future research. This is an issue of great importance for project managers who are working on global projects since they face many issues that are related to or result from cultural differences.

This dissertation has found two principal results related to the KS variables namely: Extrinsic Motivation and Knowledge Ownership. It is worthwhile mentioning that motivation has been often mentioned in the KS literature (Bartol and Srivastava, 2002; Osterloh and Frey, 2000; Tan et al., 2010). Unexpectedly, limited studies (i.e Smith and Rupp, 2003) in relation to motivation and KS have employed motivation theories such as expectancy theory, justice theory and social cognitive theory (Chiu et al., 2006; Wang and Noe, 2010). However, these previous mentioned theories have been used in explaining other behaviors such as, development and decision making (i.e. Maurer and Tarulli, 1994; Travis, 2011). Therefore, it will be applicable to use them in investigating motivation in explaining KS behavior, opening up another avenue for future research. In regard to Knowledge Ownership, very few studies have looked at this concept (i.e Constant et al., 1994). More research is needed to investigate the Knowledge Ownership concept and what motives impact it from a cultural point of view (Sabetzadeh and Tsu, 2011). It will be worthwhile to investigate Knowledge Ownership versus anticipated reciprocal relationships.

## 8. Conclusion

The main objective of this study is to investigate the influence of NC on KS within the context of global projects in the banking industry. This dissertation makes a substantive contribution to understanding the influence of NC on KS within the context of global projects in the banking industry. The dissertation findings and the literature review highlights the complexity of such an association. This research demonstrates that greater attention should be given to further investigation of this relationship. With reference to the literature review chapter, three main research objectives were highlighted. The remaining sections, will discuss the main conclusions being made for each question along with its objectives.

### 8.1 Conclusions about each research question

Due to the complexity of the relationship being studied in this dissertation, three main research questions were formed to cover each aspect of the study. The findings were discussed in chapters 5, 6 and 7. However, this section draws overall conclusions for each research question.

#### 8.1.1 RQ1

*RQ1 asked "What is the influence of NC on KS?".* In order to understand this relationship three major steps were taken. First, a theoretical understanding of NC and NC dimensions was investigated. To do so, six major frameworks of national cultures were reviewed in which five common dimensions between them were highlighted namely: 1) Hierarchy-Equality; 2) Individualism- Collectivism; 3) Mastery-Harmony; 4) Monochronism-Polychronism; 5) Universalism-Particularism. Second, a critical review related to knowledge and KS were made of the general literature as well as specifically for the banking industry context. Based on this understanding developed from a theoretical perspective and in relation to the previous limited research evidence, the relationship was identified and found by systematic empirical research and the findings of this dissertation. Although only three out of thirteen hypotheses were

accepted, an additional fourteen relationships were found-See Table 43. The revealed findings confirm the need to carry out more research.

### **8.1.2 RQ2**

*RQ2 asked "How does NC influence processes of KS?".* The "How" question was carried out two major phases. First, theoretical and empirical critiques of previous research on the links between NC and KS was provided. For example, limited research has been conducted examining the relationship between NC and KS in different work settings such as global projects (Alavi and Tiwana, 2002). In addition, most of the studies have focused taking China as an example to investigate KS in relation to cultural difference (Wang and Noe , 2010). Second, in order to uncover the "How" question, a survey was developed to assess the influence of NC on KS within the context of global projects in which four different nationalities were selected as a sample including Arab, Philipino, Pakistani and Indian employees. Two outstanding findings were found namely: Arab rated higher than other samples in Extrinsic Motivation and Arab also rated higher on Knowledge Ownership in comparison to other samples. Nevertheless, the model developed for KS being implemented to structure the survey needs further testing and validation. In addition, in relation to project management, it would be interesting to look at this relationship in different phases of the project such as initial, planning, implementing and closeout.

### **8.1.3 RQ3**

*RQ3 asked "What constitutes global project management for global projects in the banking industry?".* This dissertation has contributed exceptionally in formulating original literature in project management in the banking sector. The lack of up-to-date literature in project management in the banking sector is also disappointing. Developments are therefore needed to look at project management in the banking sector since it's vital in projects.

This research question was very challenging considering the immaturity of global project management in general and in the banking industry which was highlighted in the literature



review. Nevertheless, the researcher has supported the literature review by analyzing similarities and differences between global project management and global organization management which is a comparatively well established literature. The review of the literature did not find any major difference between managing global organization projects and managing global projects. The later can be explained by the over-reliance of the global project literature on virtual concepts rather than more focused attempts to characterize a new and distinct form of project. In addition, the literature was also strengthened by the additional critical analysis of global project management and global projects in BankCo and three examples from BankCo were provided.

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# Appendix 1

## Research contract

Dear Employee,

I invite you to participate in a research survey on the influence of national culture on knowledge sharing processes. I am currently conducting this research for a university in Dubai.

The questionnaire contains 3 sections:

- Part A - Please answer all background questions.
- Part B refers to 7 knowledge sharing factors.
- Part C - Please answer all culture questions.

The questionnaire should take around 15 minutes of your time. Your participation will be kept strictly confidential; all answers will remain anonymous and will only be referred to in statistical data. If you wish to know more about the purpose of this study or any relevant information, then please feel free to contact me on my email.

Your return of the completed questionnaire indicates your consent for the information you provide to be used in the research. I hope that you are willing to participate in my research project, and if you want a copy of the aggregated results please confirm by email when you complete your questionnaire.

Thank you for your co-operation  
Noora Mohammed Alshamsi

[Noora.mohammed.alshamsi@citi.com](mailto:Noora.mohammed.alshamsi@citi.com)

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**Start Survey**

# Appendix 2

## Questionnaire

### Part A – Background

**1. Please select your gender.**

- ☒ Male
 ☐ Female

**2. Please select your age category.**

- ☐ Less than 25
 ☐ 25-35
 ☒ 36-46
 ☐ 47-57
 ☐ 58+

**3. Please select your nationality.**

- ☐ UAE national
 ☒ Indian
 ☐ Pakistani
 ☐ American
 ☐ British
 ☐ Other – Please Specify

**4. Please select the highest level of education you have completed.**

- ☐ High school or less
 ☒ College
 ☐ Bachelor's degree (4 years degree)
 ☐ Post graduate degree
 ☐ Other – Please Specify

**5. Please select from the following choices, the option that best describes your position at work.**

- ☐ High managerial
 ☐ Intermediate managerial
 ☒ Junior managerial
 ☐ Non-managerial

**6. Please indicate numbers of years worked in current organization.**

- ☐ One year or less
 ☐ 2 - 7
 ☒ 8 - 13
 ☐ 14 - 19
 ☐ 20 years or above

**7. Please indicate your total years of experience.**

- ☐ One year or less
 ☐ 2 - 7
 ☒ 8 - 13
 ☐ 14 - 19
 ☐ 20 years or above

## Part B – Knowledge Sharing

Please indicate the degree to which you agree or disagree with the following statements.

### Factor One: Intention

- |                                                                             |                      |
|-----------------------------------------------------------------------------|----------------------|
| 1. I will share my knowledge with other members in the organization.        | <input type="text"/> |
| 2. I intend to share my knowledge with other members in the organization.   | <input type="text"/> |
| 3. I will try to share my knowledge with other members in the organization. | <input type="text"/> |
| 4. I plan to share my knowledge with other members in the organization.     | <input type="text"/> |

### Factor Two: Subjective Norms

- |                                                                                          |                      |
|------------------------------------------------------------------------------------------|----------------------|
| 1. My boss thinks that I should share knowledge with other members in the organization.  | <input type="text"/> |
| 2. My colleagues think I should share knowledge with other members in the organization.  | <input type="text"/> |
| 3. My boss expects me to share my knowledge with other members in the organization.      | <input type="text"/> |
| 4. My colleagues expect me to share my knowledge with other members in the organization. | <input type="text"/> |
| 5. My boss shares his/her knowledge with other members in the organization.              | <input type="text"/> |
| 6. My colleagues share knowledge with other members in the organization.                 | <input type="text"/> |

### Factor Three: Motivation

- |                                                                                                             |                      |
|-------------------------------------------------------------------------------------------------------------|----------------------|
| 1. Sharing knowledge with my co-workers improves the likelihood of getting a better work assignment for me. | <input type="text"/> |
| 2. Sharing knowledge with my co-workers improves the likelihood of getting a promotion for me.              | <input type="text"/> |
| 3. Sharing knowledge with my co-workers improves the likelihood of getting a higher salary for me.          | <input type="text"/> |
| 4. Sharing knowledge with my co-workers improves the likelihood of getting a bonus for me.                  | <input type="text"/> |
| 5. I expect to get more job security when I share knowledge with my co-workers.                             | <input type="text"/> |

### Factor Four: Knowledge Ownership

- |                                                                                                                    |                      |
|--------------------------------------------------------------------------------------------------------------------|----------------------|
| 1. Sharing knowledge with my co-workers makes me lose my unique value in the organization.                         | <input type="text"/> |
| 2. Sharing knowledge with my co-workers makes me lose my power base in the organization.                           | <input type="text"/> |
| 3. When I share knowledge with my co-workers, I believe I will lose my knowledge that no one else has.             | <input type="text"/> |
| 4. Sharing knowledge with my co-workers makes me lose my knowledge that makes me stand out with respect to others. | <input type="text"/> |

### Factor Five: Social Network

- |                                                                                     |                      |
|-------------------------------------------------------------------------------------|----------------------|
| 1. I communicate frequently with most members of the organization.                  | <input type="text"/> |
| 2. I communicate with other members on the organization through informal meetings.  | <input type="text"/> |
| 3. I interact and communicate with other people or groups outside the organization. | <input type="text"/> |
| 4. I actively participate in communities of practice.                               | <input type="text"/> |

**Factor Six: Preferred Mode of Communication**

1. I feel more comfortable interacting with my coworkers face-to-face in completing my assignments/projects.
2. I always prefer using emails and as a main tool to complete my assignments/projects.
3. I feel more on ease to use the telephone in completing my assignments/projects.

**Factor Seven: Usefulness of Technology**

1. Technology (databases, discussion group etc.) enables me to share my knowledge more effectively with other members in the organization.
2. Technology enables me to share my knowledge faster with other members in the organization.
3. Technology makes it easier for me to share my knowledge with other members in the organization.
4. I find technology useful in knowledge sharing.



### Part C – Culture

**Please indicate the degree to which you agree or disagree with the following statements.**

- |                                                                                                                                                          |                                                            |
|----------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|
| 1. I do not like to juggle several activities at the same time.                                                                                          | <input style="width: 100px; height: 20px;" type="text"/> ▼ |
| 2. People should not try to do many things at once.                                                                                                      | <input style="width: 100px; height: 20px;" type="text"/> ▼ |
| 3. When I sit down at my desk I work on one project at a time.                                                                                           | <input style="width: 100px; height: 20px;" type="text"/> ▼ |
| 4. I am comfortable doing several things at the same time.                                                                                               | <input style="width: 100px; height: 20px;" type="text"/> ▼ |
| 5. Listeners should be able to understand what a speaker is trying to express, even when the speaker does not say everything they intend to communicate. | <input style="width: 100px; height: 20px;" type="text"/> ▼ |
| 6. Speakers should not expect listeners will figure out what they really mean unless the intended message is stated precisely.                           | <input style="width: 100px; height: 20px;" type="text"/> ▼ |
| 7. A listener should understand the intent of the speaker from the way the person talks.                                                                 | <input style="width: 100px; height: 20px;" type="text"/> ▼ |
| 8. Even if not stated exactly, a speaker's intent will rarely be misunderstood.                                                                          | <input style="width: 100px; height: 20px;" type="text"/> ▼ |
| 9. People should be able to understand the meaning of a statement by reading between the lines.                                                          | <input style="width: 100px; height: 20px;" type="text"/> ▼ |
| 10. Intentions not explicitly stated can often be inferred from the context.                                                                             | <input style="width: 100px; height: 20px;" type="text"/> ▼ |
| 11. A speaker can assume that listeners will know what they really mean.                                                                                 | <input style="width: 100px; height: 20px;" type="text"/> ▼ |
| 12. People understand many things that are left unsaid.                                                                                                  | <input style="width: 100px; height: 20px;" type="text"/> ▼ |
| 13. Fewer words can often lead to better understanding.                                                                                                  | <input style="width: 100px; height: 20px;" type="text"/> ▼ |
| 14. The context in which a statement is made conveys as much or more information than the message itself.                                                | <input style="width: 100px; height: 20px;" type="text"/> ▼ |
| 15. Misunderstandings are more often caused by the listener's failure to draw reasonable inferences, rather than the speaker's failure to speak clearly. | <input style="width: 100px; height: 20px;" type="text"/> ▼ |
| 16. You can often convey more information with less words.                                                                                               | <input style="width: 100px; height: 20px;" type="text"/> ▼ |
| 17. Some ideas are better understood when left unsaid.                                                                                                   | <input style="width: 100px; height: 20px;" type="text"/> ▼ |
| 18. The meaning of a statement often turns more on the context than the actual words.                                                                    | <input style="width: 100px; height: 20px;" type="text"/> ▼ |

**Please indicate the degree to which you agree or disagree with the following statements on a 1-7 point scale.**

1. I believe that followers should:

- ☐ 1 Obey their boss without question
 ☐ 2
 ☐ 3
 ☐ 4
 ☐ 5
 ☐ 6
 ☐ 7 Question their boss when in disagreement

2. I believe that power should be:

- ☐ 1 Concentrated at the top
 ☐ 2
 ☐ 3
 ☐ 4
 ☐ 5
 ☐ 6
 ☐ 7 Shared throughout the society

3. In this organization, men are encouraged to participate in professional development activities more than women.

- ☐ 1 Strongly agree
 ☐ 2
 ☐ 3
 ☐ 4 Neither agree nor disagree
 ☐ 5
 ☐ 6
 ☐ 7 Strongly disagree

4. In this organization, people are generally very:

- ☐ 1 Very concerned about others
 ☐ 2
 ☐ 3
 ☐ 4
 ☐ 5
 ☐ 6
 ☐ 7 Not at all concerned about others

5. In this organization, people are generally:

- ☐ 1 Very sensitive toward others
 ☐ 2
 ☐ 3
 ☐ 4
 ☐ 5
 ☐ 6
 ☐ 7 Not at all sensitive toward others

6. I believe that orderliness and consistency should be stressed, even at the expense of experimentation and innovation.

- ☐ 1 Strongly Agree
 ☐ 2
 ☐ 3
 ☐ 4
 ☐ 5
 ☐ 6
 ☐ 7 Strongly Disagree

7. I believe that societal requirements and instructions should be spelled out in detail so citizens know what they are expected to do.

- ☐ 1 Strongly Agree
 ☐ 2
 ☐ 3
 ☐ 4
 ☐ 5
 ☐ 6
 ☐ 7 Strongly Disagree

8. In this organization managers encourage group loyalty even if individual goals suffer.

- ☐ 1 Strongly Agree
 ☐ 2
 ☐ 3
 ☐ 4
 ☐ 5
 ☐ 6
 ☐ 7 Strongly Disagree

9. The pay and bonus system in this organization is designed to maximize:

- ☐ 1 Individual Interests
 ☐ 2
 ☐ 3
 ☐ 4
 ☐ 5
 ☐ 6
 ☐ 7 Collective Interests

10. In this organization, group members take pride in the individual accomplishments of their group.

- ☐ 1 Strongly Agree
 ☐ 2
 ☐ 3
 ☐ 4
 ☐ 5
 ☐ 6
 ☐ 7 Strongly Disagree

11. In this organization, group managers take pride in the individual accomplishments of their group members.

☐ 1      ☐ 2      ☐ 3      ☐ 4      ☐ 5      ☐ 6      ☐ 7  
Strongly Agree      Strongly Disagree

12. How frequently in your experience are employees afraid to express disagreement with their managers?

